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TRANSCRIPT OF RECORD.

SUPREME COURT OF THE UNITED STATES.

OCTOBER TERM, 1908.

No. 830.

MINNESOTA STATE LIBRARY

LEEDS AND CATLIN COMPANY, PETITIONER,

vs.

VICTOR TALKING MACHINE COMPANY AND UNITED STATES GRAMOPHONE COMPANY.

ON WRIT OF CERTIORARI TO THE UNITED STATES CIRCUIT COURT OF APPEALS FOR THE SECOND CIRCUIT.

PETITION FOR CERTIORARI FILED MAY 21, 1908.
CERTIORARI AND RETURN FILED JUNE 11, 1908.

(20,707.)

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(20,707.)

SUPREME COURT OF THE UNITED STATES.

OCTOBER TERM, 1907.

No. 307.

LEEDS AND CATLIN COMPANY, PETITIONER,

vs.

VICTOR TALKING MACHINE COMPANY AND UNITED STATES GRAMOPHONE COMPANY.

ON WRIT OF CERTIORARI TO THE UNITED STATES CIRCUIT COURT OF APPEALS FOR THE SECOND CIRCUIT.

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United States Circuit Court of Appeals for the Second Circuit.

THE VICTOR TALKING MACHINE COMPANY and THE UNITED STATES GRAMOPHONE COMPANY, Complainants-Appellees,

vs.

THE LEEDS & CATLIN COMPANY, Defendant-Appellant.

Transcript of Record.

Appeal from the Circuit Court of the United States for the Southern District of New York.

Printed under the Direction of the Clerk.

Circuit Court of the United States.

SOUTHERN DISTRICT OF NEW YORK.

In Equity, No. 8797.

Suit on Berliner Gramophone Patent No. 534543. 2

VICTOR TALKING MACHINE COMPANY and the United States Gramophone Company,
Complainants,

vs.

LEEDS & CATLIN COMPANY,
Defendant.

To the Honorable Judges of the Circuit Court for the United States for the Southern District of New York: 3

The Victor Talking Machine Company, a corporation duly organized and existing under the laws of the State of New Jersey, having its principal office in the City of Camden, State of New Jersey, and the United States Gramophone Company, a corporation duly organized and existing under and by virtue of the laws of the State of West Virginia, having its principal office in Harper's Ferry, State of West Virginia, bring this, their bill of complaint, against the Leeds & Catlin Company, a corpora-

4 tion organized and existing under the laws of the State of New York, and having its office and principal place of business in the City of New York, State of New York, within the Southern District of New York.

And thereupon your orators complain and say:

1. That Emile Berliner, of the City of Washington, District of Columbia, was the original, first and sole inventor of certain new and useful improvements in gramophones, being improvements relating to recording and reproducing speech and other sounds, which improvements were not known or used by others in this country before his invention
5 thereof, and were not patented or described in any printed publication in this or any foreign country before his invention thereof, and was not in public use or on sale in the United States for more than two years prior to his application for a patent therefor, and which had not been abandoned.

2. Your orators further show unto your Honors that the said Emile Berliner, being as aforesaid the first inventor and discoverer of the said new and useful improvements in gramophones or improvements relating to recording and reproducing speech and other sounds, did, on the thirteenth day of March, 1892, duly make application to the Honora-
6 ble Commissioner of Patents at Washington, D. C., for letters patent of the United States for the said invention, and on the said date filed his said application with the said Honorable Commissioner of Patents in due and proper form, and thereafter duly and fully prosecuted said application.

3. Your orators further show that the said Emile Berliner being then the sole and exclusive owner of the said invention, and of all letters patent of the United States to be issued therefor, did during the pendency of the said application, by instrument

in writing duly executed the twenty-ninth day of January, 1895, and recorded at the Patent Office at Washington, D. C., in Liber C 51, page 185, etc., of Transfers of Patents, assign, sell and set over unto your orator, the United States Gramophone Company, the exclusive and entire right, title and interest in and to the said invention, and in and to all letters patent to be issued therefor, and all rights of the said Berliner therein and thereunder whatsoever, as by reference to the said instrument, or a duly authenticated copy thereof, in Court to be produced, will more fully and at large appear. 7

4. Your orators further show that upon the said application of the said Emile Berliner, letters patent of the United States were issued in the name of the said Emile Berliner to your orator, the United States Gramophone Company, as assignee, in due form of law, in the name of the United States of America, under the seal of the Patent Office of the United States, signed by the Secretary of Interior, and countersigned by the Commissioner of Patents of the United States, and duly delivered, bearing date the nineteenth day of February, 1895, and numbered 534543, whereby there was granted and secured to your orator, the United States Gramophone Company, its successors and assigns, for the term of seventeen years from the date of said letters patent, and within the United States and its Territories, the full and exclusive right and liberty of making, constructing, using and vending the said invention and improvements, as set forth in the said letters patent, a duly certified copy of which is ready here in Court to be produced, and by virtue whereof, and of the said assignment, your said orator, the United States Gramophone Company, became the sole owner of all rights and privileges, granted and secured, by the said letters patent, and of all rights of the said Emile Berliner in the prem- 8 9

10 ises, a copy of said Letters Patent No. 534543 being hereto annexed and marked Exhibit A.

5. Your orators further show unto your Honors that by agreement dated the second day of September, A. D. 1895, and recorded in the United States Patent Office in Liber S 52, page 207, etc., your orator, the United States Gramophone Company, as licensor, made and entered into an agreement with William C. Jones, of the City of New York, State of New York, as licensee, subject to the conditions therein contained, by which said Jones acquired as licensee the sole and exclusive right to manufacture, sell, lease and deal in, in the United States, the said
11 invention hereinbefore referred to, patented by Letters Patent No. 534543, dated February 19, 1895, together with other inventions and letters patent issued to the said Emile Berliner, assignor to said United States Gramophone Company, relating to sound recording and reproducing with the right to assign the same to others. That by agreement also dated the second day of September, A. D. 1895, between the said Emile Berliner and the said William C. Jones, and recorded in the Patent Office of the United States in Liber S 52, page 214, etc., the said agreement above noted was *inter alia* confirmed by the said Emile Berliner unto the said William C. Jones.

12 That by agreement dated the fourth day of October, A. D. 1895, between the said United States Gramophone Company and the said William C. Jones, recorded in the said Patent Office at Washington, D. C., in Liber S 52, page 216, etc., the said agreement of September 2, 1895, between the same parties was modified, in matters relative to the payment of royalty.

6. And your orators further show unto your Honors that by declaration of trust dated the fifteenth day of October, A. D. 1895, recorded in the Patent

Office at Washington, D. C., in Liber S 52, page 219, 13
etc., and by agreement dated the first day of November, A. D. 1895, recorded in the said Patent Office at Washington, D. C., in Liber P 52, page 326, etc., the said William C. Jones transferred and assigned to the Berliner Gramophone Company, a corporation duly organized and existing under the laws of the State of Virginia, having its principal office in the City of Roanoke, State of Virginia, its successors and assigns, his entire right, title and interest as sole and exclusive licensee in and to the said Letters Patent No. 534543, and in and to the said invention therein described and claimed, and in and to the aforesaid agreements, and in and to all inventions, letters patent and rights therein and thereunder. 14

7. And your orators further show, that by agreement dated the twenty-eighth day of September, 1901, the said Berliner Gramophone Company, being then the sole owner of the said exclusive license to manufacture, sell, lease and deal in the said invention and inventions, did grant and convey, assign and set over unto Eldridge R. Johnson, of the City of Philadelphia, State of Pennsylvania, the said exclusive license, and all its rights therein and thereunder, to manufacture, sell, use and deal in the said invention and inventions, with the right to the said Johnson to assign the same unto your orator, 15
the Victor Talking Machine Company.

8. Your orators further show unto your Honors that by agreement dated the fifth day of October, 1901, the said Eldridge R. Johnson, being then the sole owner of the said exclusive license to manufacture, sell and deal in the said invention and inventions, did grant and convey, assign and set over unto your orator, the Victor Talking Machine Company, a corporation organized and existing under the laws of the State of New Jersey, the said exclu-

16 sive license and all his rights therein and thereunder to manufacture, sell and use and deal in the said invention and inventions, and all his rights and remedies for infringement of the said patent occurring during the period of the ownership by said Eldridge R. Johnson, of said exclusive license and rights.

9. And your orators further show unto your Honors that by virtue of the premises your orator, the United States Gramophone Company, is now, and has been at all times since the date of the said assignment to it, the sole and exclusive owner of the said Letters Patent No. 534543, and that
17 your orator, the Victor Talking Machine Company, is now, and has been at all times since the date of the said agreement with it, and the said transfers and assignments of the said rights to it, the sole and exclusive licensee as aforesaid, under the said Letters Patent No. 534543, for the manufacture and sale of said invention patented in said letters patent, throughout the United States. Your orators show unto your Honors that they are now the sole and exclusive owners of the legal and equitable title in and to the said Letters Patent No. 534543, and in and to the improvements therein contained and of all rights of action thereto pertaining, as will more fully and at large appear by reference to the
18 said agreements and assignments, all of which will in Court be produced.

10. And your orators further show unto your Honors that they have expended large sums of money in practicing said invention and improvements patented in the said Letters Patent No. 534543, and in introducing the same into public use, and the same are of great commercial value and practical utility; that a great public interest has been manifested therein, and a large demand created for apparatus constructed in accordance with

or embodying the same, which demand your orators are ready and able to supply; that the public generally, in all parts of the United States have recognized and acquiesced in the facts that the said Emile Berliner was the first and original inventor of the said invention, and that the Patent No. 534543 is good and valid, that the public have also acknowledged the claims of your orators to the exclusive rights of the said invention under said patent; and that but for the infringements and wrongs hereinafter complained of and of a few recent infringements encouraged by the unlawful acts of this defendant, your orators would be now in peaceful possession and enjoyment of the said letters patent and invention, and of the income derivable therefrom; and that your orators and their predecessors in title have never acquiesced in any infringements of their rights in the premises at any time. 19 20

11. Yet, as your orators are informed and believe and further show unto your Honors, that the said Leeds & Catlin Company the said defendant herein named, well knowing all the facts herein set forth, but contriving to injure your orators and deprive them and each of them, of the benefits and advantages which might and otherwise would accrue to them, and each of them, from said patented devices, methods and things, have made, sold and used, and are now making and selling and using. apparatus and things relative to sound recording or reproducing, having and containing the devices and things patented in said Letters Patent No. 534543, particularly in claims numbered 5, 32, 35, and employing methods covered by the said Letters Patent, or in all substantial respects the same, the exclusive right to make, use and vend which to others to use is legally vested in your orators. 21

22 12. And your orators further show unto your Honors that notwithstanding the fact that the said defendant has been duly notified by your orators of your orators' rights in the premises, and of the fact that the said defendant was infringing the said Letters Patent of your orators, and that the said defendant should desist from such infringements, the said defendant has continued, and is still continuing, to the great and irreparable damage and injury of your orators, the manufacture, sale and use of the said infringing devices and things.

13. And your orators further show that they
23 have given notice to the public that the said invention is patented and have affixed, or caused to be affixed, to all apparatus and devices manufactured and sold under the authority of your orators the word "Patented," together with the day and year of the grant of the said patent, of which notice the said defendant has had full knowledge.

14. And so it is, may it please your Honors, that the said defendant, as your orators are informed and believe, without the license of your orators, or any of them, and without any license whatsoever, against the will of your orators, and in violation of their rights, has made and sold, and intends to con-
24 tinue to make and sell, within the Southern District of New York, and elsewhere within the United States, said patented devices and things, each having and containing the said patented features, substantially the same in all material respects in construction, operation and effect as in your orators' said letters patent mentioned, and employing methods covered by said letters patent; and that the said defendant is largely advertising said infringements, to the great damage and injury of your orators, and

that the said defendant refuses to pay unto your orators any of the profits which said defendant has made by such unlawful manufacture and sale or to desist from the further infringement of the said letters patent, though requested so to do, all of which acts and doings are in violation of the exclusive rights and privileges so, as aforesaid, vested in your orators under and by virtue of the said letters patent, are contrary to equity and good conscience, tend to the manifest injury of your orators in the premises, and will, (if said defendant is allowed to continue said infringements, irreparably damage and injure your orators, and each of them, depreciate or destroy the value of the exclusive franchises to which your orators are entitled under the patent aforesaid, and will deprive your orators of the benefits and advantages for the loss of which there exists no adequate legal remedy.

And your orators, therefore, pray as follows:

I. That the said defendant be required by decree of this Honorable Court to account for and pay over to your orators such gains and profits as have accrued or arisen, or been earned or received by the said defendant, and all such gains and profits as would have accrued to your orators, but for the unlawful doing of said defendant and all damages your orators have sustained thereby.

II. That the said defendant may be compelled, by the order of this Honorable Court, to deliver up to the judicial custody for destruction, in manner to be provided for in said order, all infringing apparatus and sound records, in the possession of or under the control of said defendant.

III. That the defendant, its associates, attorneys, servants, clerks, agents and workmen, may be perpetually enjoined and restrained, by a writ of in-

28 junction issuing out of and under the seal of this Honorable Court, from directly or indirectly making or causing to be made, using or causing to be used, selling or causing to be sold. any machine or apparatus or sound record, embodying or constructed or operated in accordance with the invention or improvements set forth in the letters patent aforesaid.

IV. That your Honors will grant unto your orators a preliminary injunction, issuing out of and under the seal of this Honorable Court, enjoining and restraining the said defendant, its associates, servants, clerks, agents and workmen, to the same
29 purport, tenor and effect as hereinbefore prayed for with regard to said perpetual injunction; and

V. That the defendant be decreed to pay the costs of this suit; and

VI. That your orators may have such other and further relief as the equity of the case may require.

To the end therefore, that the defendant may, if it can, show why your orators should not have the relief prayed for, and may full, true and direct answer make, but not under oath (answer under oath being expressly waived), according to the best and utmost of its knowledge, information, remem-
30 brance and belief, to the several matters hereinbefore averred and set forth, as fully and particularly as if the same were repeated paragraph by paragraph, and said defendant thereto severally and specifically interrogated, may it please your Honors to grant your orators a writ of *subpoena ad respondendum* issuing out of and under the seal of this Honorable Court, directed to said defendant, the Leeds & Catlin Company, commanding it to appear and make answer to this bill of complaint, and

to perform and abide by such order and decree as 31
to this Court may seem just.

And your orators will ever pray.

HORACE PETTIT,
Of Counsel for Complainants.

July 11th, 1904.

Stimson and Williams,
Solicitors for Complainant,
55 Liberty Street,
New York City.

State of Pennsylvania, }
City and County of Philadelphia, } ss.:

Eldridge R. Johnson, being duly sworn, deposes 32
and says that he is the President of the Victor Talking Machine Company, one of the complainants named in the foregoing bill; that he has read the same and knows the contents thereof, and that the same is true of his own knowledge, save of the matters therein stated to be alleged upon information and belief, and that as to those matters he believes it to be true.

ELDRIDGE R. JOHNSON.

Sworn to and subscribed before me this }
11th day of July, A. D. 1904. }

John B. Rutherford,
[SEAL.] Notary Public, 33
My Commission expires Feb. 27, 1905.

[Bill of complaint filed July 12, 1904.]

34 CIRCUIT COURT OF THE UNITED STATES.

SOUTHERN DISTRICT OF NEW YORK.

VICTOR TALKING MACHINE COMPANY and the United States Gramophone Company, Complainants, vs. LEEDS & CATLIN COMPANY, Defendant.	In Equity. No. 8797. Patent No. 534543.

35

The answer of the defendant above-named to the bill of complaint of the complainants above-named.

To the Honorable, the Judges of the Circuit Court of the United States for the Southern District of New York:

This defendant, now and at all times hereafter saving and reserving to itself all benefit and advantage of exception which can or may be had to the errors, uncertainties and insufficiencies in said complainants' bill of complaint, for answer thereunto says:

36 First. Defendant has no knowledge or information sufficient to form a belief as to whether the Victor Talking Machine Company ever was or is a corporation organized or existing under the Laws of the State of New Jersey, or having an office in the City of Camden, State of New Jersey; or whether the United States Gramophone Company ever was or is a corporation organized or existing under or by virtue of the Laws of the State of West Virginia, or having an office in Harper's Ferry, State of West Viginia, and leaves complainants to make such proof thereof as they may be advised is

material or necessary. Defendant admits that it 37
is now and was at the time of the filing of the bill of complaint herein a corporation organized and existing under the Laws of the State of New York, and having its office and principal place of business in the City of New York, State of New York, within the Southern District of New York.

Second. Upon information and belief, defendant denies that Emile Berliner was the original or first or sole inventor of the alleged improvents in gramophones, or improvements relating to recording and reproducing speech and other sounds mentioned in said bill; and denies that said alleged improvements were new or useful when, as alleged in said bill, they 38
were invented by said Emile Berliner; and denies that said alleged improvements were not known and were not used by others in this country before the alleged invention thereof by said Emil Berliner; and denies that said alleged improvements were not patented and were not described in any printed publication in this or any foreign country before his alleged invention thereof; and denies that said alleged improvements were not in public use and were not on sale within the United States for more than two years prior to his application in the United States for a patent therefor; and denies that said alleged improvements had not been abandoned 39
at the time mentioned in said bill.

Third. Defendant denies that the said Emile Berliner was the first inventor or discoverer of the said alleged new and useful improvements in gramophones, or improvements relating to recording and reproducing speech and other sounds; and denies that it has any knowledge or information sufficient to form a belief as to whether said Berliner made application for letter patent of the United States for said invention to the Commissioner of Patents or otherwise, on March 13, 1892, or at any other

40 time, or whether said Berliner ever filed such an application with the Commissioner of Patents or ever prosecuted such an application, and leaves complainants to make such proof thereof as they may be advised is material or necessary.

Fourth. Defendant denies that said Berliner ever was the sole or exclusive owner of the said alleged invention or ever owner or was entitled to any letters patent of the United States to be issued therefor, and denies that it has any knowledge or information sufficient to form a belief as to whether, during the pendency of said application or at any time, by instrument in writing or otherwise ex-
41 ecuted January 29, 1895, or at any other time, the said Berliner sold, assigned, transferred or set over unto the United States Gramophone Company, the exclusive or entire or any right, title or interest in or to the said alleged invention, or in or to the letters patent to be issued therefor, or all or any rights of the said Berliner therein or thereunder, and leaves complainants to make such proof thereof as they may be advised is material or necessary.

Fifth. Defendant admits that Letters Patent of the United States Numbered 534543 and bearing date February 19, 1895, were issued in the name of Emile Berliner, but defendant denies that it has
42 any knowledge or information sufficient to form a belief as to whether the said letters patent were issued upon the application of the said Berliner, or whether the United States Gramophone Company was the assignee of the entire or any right, title or interest therein or thereunder, or whether the said letters patent were issued in due form of law, or in the name of the United States of America, or under the seal of the Patent Office of the United States, or were signed by the Secretary of the Interior, or countersigned by the Commissioner of Patents of the United States, or were ever delivered

and leaves complainants to make such proof thereof as they may be advised is material or necessary; and defendant denies that by said letters patent there was granted or secured to the United States Gramophone Company or to its successors or assigns for the term of seventeen years, or for any term, within the United States and its territories or any part thereof, the full or exclusive or any right or liberty of making, constructing, using or vending the said alleged invention or improvements, and defendant denies that it has any knowledge or information sufficient to form a belief as to whether the United States Gramophone Company by virtue thereof, or by virtue of the said alleged assignment or otherwise ever become the owner, sole or other, of all or any rights or privileges alleged to have been granted and secured by the said letters patent, or of all or any rights of the said Emile Berliner in the premises, and leaves complainants to make such proof thereof as they may be advised is material or necessary. 43 44

Sixth. Defendant denies that it has any knowledge or information sufficient to form a belief as to whether by agreement dated September 2, 1895, or otherwise the United States Gramophone Company as licensor or otherwise made or entered into an agreement with William C. Jones as licensee or otherwise; or whether the said alleged agreement was subject to conditions therein contained; or whether by virute of said agreement said Jones acquired as licensee or otherwise the sole or exclusive or any right to manufacture, sell, lease or deal in in the United States or in any part thereof the said alleged invention hereinbefore referred to and alleged to have been patented by Letters Patent No. 534543, dated February 19, 1895, or whether the said alleged invention formed any part of the subject matter of the said alleged agreement or 45

was within the meaning of the said agreement, or whether the said Jones acquired by virtue of the said alleged agreement any right to assign to others any right acquired by him under the said alleged agreement; or whether by agreement also dated September 2, 1895, or otherwise between said Berliner and said Jones, the said agreement, above noted was confirmed by the said Berliner unto the said Jones, or whether by agreement dated October 4, 1895, or otherwise between the United States Gramophone Company and the said Jones the said agreement or either of the said agreements dated September 2, 1895, was modified in matters relative to the payment of royalties or otherwise, and defendant leaves complainant to make such proof thereof as they may be advised is material or necessary.

Seventh. Defendant denies that it has any knowledge or information sufficient to form a belief as to whether, by a declaration of trust, dated October 15, 1895, or otherwise, said Jones transferred or assigned to the Berliner Gramophone Company or to its successors or assigns, all or any of his right, title or interest as exclusive or sole licensee or otherwise in or to the said alleged invention described and claimed in said Letters Patent No. 534543, or in or to the said Letters Patent No. 534543, or in or to the aforesaid agreements and assignments or any of them, or in or to all or any inventions, letters patent or rights therein or thereunder, and leaves complainants to make such proof thereof as they may be advised is material or necessary.

Eighth. Defendant denies that it has any knowledge or information sufficient to form a belief as to whether by agreement dated September 28, 1901, or otherwise the said Berliner Gramophone Company, did at any time grant or convey, assign or set over unto Eldridge R. Johnson the said exclu-

sive or any license or all or any of its rights therein 49
or thereunder, to manufacture, sell, use or deal in the said alleged invention or inventions; or whether said Berliner Gramophone Company so did with the right to said Johnson to assign the same unto the Victor Talking Machine Company, or whether said Berliner Gramophone Company was then or at any time the owner, sole or other, of said alleged exclusive license to manufacture, sell, lease or deal in said alleged invention and inventions, or any of them, and leaves complainants to make such proof thereof as they may be advised is material or necessary.

Ninth. Defendant denies that it has any knowl- 50
edge or information sufficient to form a belief as to whether said Eldridge R. Johnston ever was the owner, sole or other, of the said alleged license, exclusive or other, to manufacture, sell or deal in the said alleged invention or inventions or any of them, or as to whether said Johnson, by agreement dated October 5, 1901 or otherwise, ever did grant or convey, assign or set over unto the Victor Talking Machine Company the said alleged license, exclusive or other, or all or any of his rights therein or thereunder to manufacture, sell or use or deal in said alleged invention or inventions or any of them, or all or any of his rights and remedies for infringement 51
of the said patent occurring during the alleged period of ownership of said Johnson of said license or rights, exclusive or other, or occuring during any period, and leaves complainants to make such proof thereof as they may be advised is material or necessary.

Tenth. Defendant denies that it has any knowledge or information sufficient to form a belief as to whether the United States Gramophone Company is now or ever was the owner, sole or exclusive or other of the said Letters Patent No. 534543, or

52 whether the Victor Talking Machine Company is now or ever was the licensee sole or exclusive or other under the said Letters Patent No. 534543, for the manufacture or sale of the said alleged invention alleged to be patented in said letters patent throughout the United States or any part hereof; or whether the complainants herein or either of them are now or ever were the owners, sole or exclusive or other, of the title legal or equitable or other, in or to the said Letters Patent No. 534543, or in or to the alleged improvements therein contained, or of all or any rights of action thereto pertaining, and leaves complainants to make such
53 proof thereof as they may be advised is material or necessary.

Eleventh. Defendant denies that it has any knowledge or information sufficient to form a belief as to whether complainants or either of them have expended any sum of money in practising said alleged invention or improvements alleged to be patented in said Letters Patent No. 534543, or in introducing the same into public use, and defendant denies that the same are of any value or practical utility; and denies that any public interest has been manifested therein; and denies that a large demand has been created for apparatus constructed in ac-
54 cordance with or embodying the same; and denies that it has any knowledge or information sufficient to form a belief as to whether complainants are now or ever were ready or able to supply the same, and leaves complainants to make such proof thereof as they may be advised is material or necessary. Defendant denies that the public in any part of the United States has recognized or acquiesced in the claim that the said Berliner was the first or original inventor of the said alleged invention, or that the Patent No. 534543 was good or valid; and denies that the public has acknowledged the claims of

complainants to the rights, exclusive or other, to the 55
said alleged invention under said patent; and denies that but for the alleged infringement or wrongs complained of in the bill of complaint herein, or of alleged recent infringements encouraged by the alleged unlawful acts of this defendant, complainants would be in posession or enjoyment of the said letters patent and alleged invention or of any income derivable therefrom; and denies that it has any knowledge or information sufficient to form a belief as to whether the alleged predecessors in title of complainants or any of them have ever acquiesced in any infringement of their alleged rights in the premises, and leaves complainants to make such 56
proof thereof as they may be advised is material or necessary.

Twelfth. Defendant denies that it has ever had any knowledge or information sufficient to form a belief as to any of the facts set forth in the bill of complaint save as it has been informed thereof by the bill of complaint herein, and denies that it has contrived to injure complainants or either of them, or to deprive them or either of them of any benefit or advantage which might or otherwise would accrue to them or either of them from said devices, methods or things; and denies that it has ever made, sold or used, or is now making, selling or 57
using apparatus or things relative to sound-recording or reproducing having or containing the devices or things patented in said Letters Patent No. 534543, or has ever employed or is now employing any method covered by the said letters patent, or in any respect the same; and denies that the right, exclusive or other, to make, use or vend which to others to use is vested in complainants or in either of them and leaves complainants to make such proof thereof as they may be advised is material or necessary.

58 Thirteenth. Upon information and belief defendant denies that it has ever been notified by complainants or either of them of the alleged rights of complainants or either of them in the premises, or of the fact that it was infringing any letters patent owned by the complainants or either of them, and denies that such ever was the fact; and that it was ever notified to desist from any such infringement; and denies that it has continued or is still continuing to manufacture, sell or use the said alleged infringing devices or things; and denies that it has so done to the damage of complainants or of either of them.

59 Fourteenth. Defendant denies that it has any knowledge or information sufficient to form a belief as to whether complainants have given notice to the public that the said alleged invention is patented; or whether complainants have affixed or caused to be affixed to all apparatus or devices manufactured or sold under their authority the word "Patented" together with the day and year of the grant of the said patent, and this defendant denies that it has had knowledge of such notice and leaves complainants to make such proof thereof as they may be advised is material or necessary; and upon information and belief defend-
60 ant alleges that prior to the beginning of this suit and since the issue of said letters patent, persons acting under the authority of complainants and of their alleged predecessors in title and in interest have, within the United States, made and vended articles in accordance with said patent without affixing thereto the word "Patented" together with the day and year the patent was granted.

Fifteenth. Defendant denies that it has ever made or sold, or intends to continue to make or to sell within the Southern District of New York or

elsewhere within the United States the said pat- 61
ented devices or things having or containing the alleged patented features or any of them, or in any respect the same in construction, operation or effect as in complainants' said letters patent mentioned, or employing any method covered by said letters patent; and denies that it has so done without the license of complainants or of either of them; or without any license whatsoever, or against the will of complainants or either of them; or in violation of the rights of them or of either of them; or to the damage or injury of complainants or of either of them; and denies that it has ever advertised or is now advertising any such infringe- 62
ment and denies that it has ever made any profit by any such unlawful or infringing manufacture and sale; and denies that it has ever been requested by complainants or by either of them to pay over to them or to either of them any such profits; and denies that it has ever refused to pay over to complainants or to either of them any such profits; and denies that it has ever refused to desist from any further infringement of said letters patent; and denies that it has ever done or caused to be done any act, thing or doing in violation of any right or privilege vested in complainants or in either of them by virtue of the said letters patent or 63
contrary to equity or good conscience, or tending to the injury of complainants or of either of them in the premises; and denies that the continuance by defendant of anything heretofore done by defendant will damage or injure complainants or either of them, or depreciate or destroy the value of any franchises which they or either of them are entitled to under the patent aforesaid; or will deprive complainants or either of them of any benefit or advantage for the loss of which there exists no adequate remedy at law. Defendant further answering alleges that at no time and at no place

64 has it in any way infringed upon the said letters patent or any of the claims thereof; or made articles; devices or things in accordance with the alleged invention set forth and claimed in said letters patent, or infringed or trespassed upon any right, privilege, interest or franchise of complainants or of either of them, or of any of their predecessors in title or interest, in the premises, in, to or under said letters patent, and defendant alleges upon information and belief that complainants, well knowing that defendant has in no way infringed upon their rights in the premises, and complainants being competitors of defendant in
65 the talking machine business, brought this suit for business purposes, and principally for the purpose of advertising the same and endeavoring thereby to injure defendant, contrary to justice, equity and good conscience.

Sixteenth. Defendant further answering alleges on information and belief that prior to the alleged invention or discovery by said Emile Berliner of the alleged improvements and inventions described and claimed in said Letters Patent No. 534543, and more than two years prior to the filing of his application therefor, the same and all material and substantial parts thereof had been shown, de-
66 scribed, patented and published in the following patents and publications, to wit:

LETTERS PATENT OF THE UNITED STATES.

Number.	Date.	Patentee.
17146	Apr. 28, 1857	Charles H. Field
32959	July 30, 1861	O. H. Bogardus
52292	Jan. 30, 1866	T. Kennedy
56141	July 3, 1866	Theodore Cooper
72521	Dec. 24, 1867	Ralph S. Mershon
93619	Aug. 10, 1869	L. Hillman

111859	Feb. 14, 1871	Fred. B. Miles	67
115934	June 13, 1871	James M. Connor	
120096	Oct. 17, 1871	Perky	
153084	July 14, 1874	Maurice Joyce	
153212	July 21, 1874	Geo. R. Babbitt	
138006	Apr. 22, 1873	Cooke	
174715	Mar. 14, 1876	Robt. B. Atchison	
183920	Oct. 31, 1876	John C. Guerrant	
191464	May 29, 1877	Loring Pickering	
219939	Sept. 23, 1879	A. Wilford Hall	
222292	Dec. 2, 1879	Thomas L. Luders	
225457	Mar. 16, 1880	Milton Bradley	
231065	Aug. 10, 1880	Robt. M. Lockwood, *et al.*	
232978	Oct. 5, 1880	John W. Kennyon	68
238929	Mar. 15, 1881	Wm. A. Leggo	
250697	Dec. 13, 1881	M. Wheless	
266746	Oct. 31, 1882	Seth E. Beedy	
271903	Feb. 6, 1883	A. S. Nichols	
277349	May 8, 1883	J. Harris Rogers	
279292	June 12, 1883	James H. M. Waldorp	
238665	Aug. 21, 1883	James W. Rogers	
287166	Oct. 23, 1883	Christopher C. Reynolds	
295219	Mar. 18, 1884	John Absterdam	
298030	May 6, 1884	Albert Schmid	
296376	Apr. 8, 1884	Rufus Anderson	69
304640	Sept. 2, 1884	Hackenberg	
305178	Sept. 16, 1884	Geo. M. Guerrant, *et al.*	
336203	Feb. 16, 1886	C. A. Bell	
341212	May 4, 1886	A. G. & C. A. Bell	
341213	May 4, 1886	Bell & Tainter.	
341214	May 4, 1886	Bell & Tainter	
341287	May 4, 1886	Sumner Tainter	
341288	May 4, 1886	S. Tainter	
12192	Jan. 9, 1855	W. J. Casselman	
349664	Sept. 21, 1886	Rodwell	

70	356677	Feb. 1, 1887	C. J. Hohenstein
	362100	May 3, 1887	Maloney
	372786	Nov. 8, 1887	E. Berliner
	364472	June 7, 1887	L. Bock, Jr.
	374133	Nov. 29, 1887	C. S. Tainter
	375579	Dec. 27, 1887	C. S. Tainter
	380535	Apr. 3, 1888	C. S. Tainter
	382790	May 15, 1888	E. Berliner
	383299	May 22, 1888	W. W. Jacques
	385886	July 10, 1888	C. S. Tainter
	385887	July 10, 1888	C. S. Tainter
	392796	Nov. 13, 1888	C. E. Hadley
	392953	Nov. 13, 1888	G. H. Herrington
	393190	Nov. 20, 1888	C. S. Tainter
71	393191	Nov. 20, 1888	C. S. Tainter
	393640	Nov. 27, 1888	E. T. Gilliland
	397856	Feb. 12, 1889	G. H. Herrington
	399264	Mar. 12, 1889	G. H. Herrington
	399265	Mar. 12, 1889	G. H. Herrington
	400629	Apr. 2, 1889	C. Batchelor
	404850	June 11, 1889	G. W. Littlehales
	407127	July 16, 1889	H. F. Searle
	408649	Aug. 6, 1889	D. W. Brown
	408998	Aug. 13, 1889	W. B. Tattershall
	409003	Aug. 13, 1889	G. Bettini
	409004	Aug. 13, 1889	G. Bettini
	409005	Aug. 13, 1889	G. Bettini
72	413282	Oct. 22, 1889	W. W. Jacques
	421450	Feb. 18, 1890	C. S. Tainter
	424914	1890	J. H. White
	424956	Apr. 8, 1890	D. W. Brown
	427279	May 6, 1890	W. Suess
	428273	May 20, 1890	M. L. Deering
	428646	May 27, 1890	C. S. Tainter
	428750	May 27, 1890	L. Glass & W. S. Arnold
	428751	May 27, 1890	L. Glass & W. S. Arnold
	429079	May 27, 1890	O. P. Austin

429827	June 10, 1890	J. H. White	73
430759	June 23, 1890	R. H. St. John	
431883	July 8, 1890	L. F. Douglass	
432462	July 15, 1890	J. H. White	
432886	July 22, 1890	J. P. Magenis	
435055	Aug. 26, 1890	Demming	
436576	Sept. 16, 1890	J. Daniels	
440046	Nov. 4, 1890	J. H. Ling	
440155	Nov. 11, 1890	I. W. Heysinger	
441361	Nov. 25, 1890	Goodwin & Burnett	
441609	Nov. 25, 1890	G. A. Beach	
454947	June 30, 1891	McMahon	
449349	Mar. 31, 1891	P. T. Dodge	
458916	Sept. 1, 1891	Oxley	74
460338	Sept. 29, 1891	I. W. Heysinger	
462687	Nov. 10, 1891	Bruening	
466922	Jan. 12, 1892	J. F. Ott	
467530	Jan. 26, 1892	J. H. White	
472417	Apr. 5, 1892	E. L. Wilson	
474410	May 10, 1892	Rosenthal & Frank	
475490	May 24, 1892	L. F. Douglass	
479431	July 26, 1892	V. Lahola	
486394	Nov. 15, 1892	W. Bruening	
486608	Nov. 22, 1892	W. Bruening	
488379	Dec. 20, 1892	G. Bettini	
488380	Dec. 20, 1892	G. Bettini	
488381	Dec. 20, 1892	G. Bettini	
489666	Jan. 10, 1893	E. L. Wilson	75
493719	Mar. 21, 1893	W. G. Henderson	
499370	June 13, 1893	W. Bruening	
503610	Aug. 22, 1893	J. W. Macintosh	
505910	Oct. 3, 1893	J. W. Wassenich	
506348	Oct. 10, 1893	C. S. Tainter	
510656	Dec. 12, 1893	C. S. Tainter	
515811	Mar. 6, 1894	A. D. Andrews	
518190	Aug. 10, 1894	A. K. Keller	
518191	Aug. 10, 1894	A. K. Keller	
518192	Aug. 10, 1894	A. K. Keller	
520106	May 22, 1894	H. B. Cox	

76	527755	Oct. 16, 1894	T. H. Macdonald
	528273	Oct. 30, 1894	H. D. Lioret
	532851	Jan. 22, 1895	J. E. Wassenich

and in the following letters patent of the United States granted to Thomas A. Edison:

	Number.	Date.
	200521	Feb. 19, 1878
	201760	Mar. 26, 1878
	213554	Mar. 25, 1879
	227679	May 18, 1880
	382414	May 8, 1888
	382416	May 8, 1888
77	382417	May 8, 1888
	382418	May 8, 1888
	382419	May 8, 1888
	382462	May 8, 1888
	386974	July 31, 1888
	393462	Nov. 27, 1888
	393463	Nov. 27, 1888
	393464	Nov. 27, 1888
	393465	Nov. 27, 1888
	393466	Nov. 27, 1888
	393966	Dec. 4, 1888
	393967	Dec. 4, 1888
	393968	Dec. 4, 1888
78	394105	Dec. 4, 1888
	394106	Dec. 4, 1888
	397280	Feb. 5, 1889
	397706	Feb. 12, 1889
	400646	Apr. 2, 1889
	400647	Apr. 2, 1889
	400648	Apr. 2, 1889
	400649	Apr. 2, 1889
	400650	Apr. 2, 1889
	406568	July 9, 1889
	406569	July 9, 1889
	406570	July 9, 1889

406571	July 9, 1889	79
406572	July 9, 1889	
406573	July 9, 1889	
406574	July 9, 1889	
406575	July 9, 1889	
406576	July 9, 1889	
414759	Nov. 12, 1889	
414760	Nov. 12, 1889	
414761	Nov. 12, 1889	
423039	Mar. 11, 1890	
426527	Apr. 29, 1890	
430274	June 17, 1890	
430276	June 17, 1890	
430277	June 17, 1890	
430278	June 17, 1890	80
430570	June 17, 1890	
437423	Sept. 30, 1890	
437424	Sept. 30, 1890	
437425	Sept. 30, 1890	
437426	Sept. 30, 1890	
437427	Sept. 30, 1890	
437429	Sept. 30, 1890	
443507	Dec. 30, 1890	
448780	Mar. 24, 1891	
448781	Mar. 24, 1891	
450740	Apr. 21, 1891	
453741	June 9, 1891	
454941	June 30, 1891	81
454942	June 30, 1891	
456301	July 21, 1891	
456302	July 21, 1891	
457344	Aug. 11, 1891	
460123	Sept. 20, 1891	
465972	Dec. 29, 1891	
484582	Oct. 18, 1892	
484583	Oct. 18, 1892	
484584	Oct. 18, 1892	
484585	Oct. 18, 1892	
488189	Dec. 20, 1892	

82	488190	Dec.	20, 1892
	488191	Dec.	20, 1892
	496191	Apr.	25, 1893
	499879	June	20, 1893
	500280	June	27, 1893
	500281	June	27, 1893
	500282	June	27, 1893
	513095	Jan.	23, 1894
	513097	Jan.	23, 1894
	526147	Sept.	18, 1894

LETTERS PATENT OF GERMANY.

	Emile Berliner	No. 45048	Nov. 8, 1887
83	Emile Berliner	No. 47099	May 16, 1888
	Emile Berliner	No. 53662	Nov. 20, 1889

LETTERS PATENT OF GREAT BRITAIN.

1857	No.	1912	William Mann
1854	No.	1206	Wiley, *et al.*
1860	No.	324	Aime L. E. Brittmayer
1865	No.	682	Lutwyche, *et al.*
1870	No.	325	Henry B. Greenwood
1877	No.	2909	Edison
1878	No.	191	Pritchett
1878	No.	1644	Edison
1878	No.	1988	Cour
84 1878	No.	3804	Bailey
1878	No.	3916	Varey
1878	No.	4074	Arnaud
1878	No.	4951	Wallich
1880	No.	495	Clark
1880	No.	631	Engel
1880	No.	1151	Courtenay
1881	No.	3129	Walker
1882	No.	2259	Barney
1882	No.	291	Hadden
1882	No.	3173	Imray
1886	No.	1947	Taylor

1886	No.	2081	de Combettes	85
1886	No.	2268	Bell	
1886	No.	6027	Johnson	
1886	No.	6042	Johnson	
1886	No.	6047	Johnson	
1886	No.	6062	Johnson	
1886	No.	9453	Wostear	
1886	No.	11499	Lake	
1887	No.	15232	Berliner	
1887	No.	16342	Anders	
1887	No.	16384	Johnson	
1887	No.	17175	Gouraud	
1888	No.	569	Hedick	
1888	No.	616	Brookes	86
1888	No.	1851	Johnson	
1888	No.	1851a	Johnson	
1888	No.	5307	Gouraud	
1888	No.	7204	Berliner	
1888	No.	9762	Adams-Randall	
1888	No.	9981	Johnson	
1888	No.	9996	Adams-Randall	
1888	No.	12593	Gouraud	
1888	No.	12594	Gouraud	
1888	No.	12860	Edmunds	
1888	No.	16212	Gouraud	
1888	No.	16480	Johnson	
1888	No.	16481	Johnson	
1888	No.	17937	Madgen	87
1888	No.	18715	Smith	
1889	No.	1058	Adams-Randall	
1891	No.	15206	Gouraud	
1893	No.	2690	Adams-Randall	
1893	No.	4685	Bott	
1893	No.	8248	Adams-Randall	
1893	No.	23366	Lioret	
1893	No.	24899	Young	
1894	No.	1478	Young	
1894	No.	6482	Moreau & Munier	
1894	No.	7080	Oulton	

88 1894 No. 15737 The Edison-Bell Phonograph Corporation, Ltd., and Wilkinson

1894 No. 16878 Lacey

1894 No. 24588 Robinson

and also in the following patents of Great Britain:

For the year 1889:

Nos. 1058, 5507, 5573, 7625, 7794, 9638, 11866, 12421, 12762, 13841, 15459, 16850, 19153, 19829, 20257, 1868, 13412, 15459.

For the year 1890:

Nos. 4681, 6685, 8197, 11456, 11668, 11669, 15245, 20290, 20306.

89 For the year 1891:

Nos. 5562, 6299, 8792, 8853, 10357, 13480, 15206, 18494, 21250.

For the year 1892:

Nos. 198, 11017, 11990, 15709, 16014.

For the year 1895:

Nos. 8072, 9526.

LETTERS PATENT OF FRANCE.

Thomas A. Edison	121697	Feb. 19, 1878
Patent of addition thereto		Feb. 19, 1878
Thomas A. Edison	129974	Sept. 16, 1878
Charles Cros	124213	July 27, 1878
Patent of addition thereto		Oct. 3, 1878
90 Antonio Vicini	128215	Mar. 17, 1879
Charles Wylier	135688	May 20, 1880
Patent of addition thereto		Mar. 23, 1880
Patent of addition thereto		July 11, 1880
Patent of addition thereto		Sept. 20, 1883
Paul Golonbitisky	145584	Dec. 7, 1881
Patent of addition thereto		Mar. 15, 1882
Patent of addition thereto		Sept. 26, 1883
Morel	146670	Mar. 17, 1882
Morel	146673	Mar. 17, 1882
Claude A. Terrier	156749	Nov. 8, 1883
Emile Berliner	186827	Nov. 8, 1887

Emile Berliner	190602	May 15, 1888	91
Emile Berliner	207090	July 19, 1890	
Werner Suess	205491	May 6, 1890	

LETTERS PATENT OF GERMANY.

Thomas A. Edison	12631	July 12, 1878
Kleist & Co.	11053	Jan. 24, 1879
Thomas A. Edison	14308	Aug. 18, 1891
Thomas A. Edison	12631	Apr. 27, 1881

LETTERS PATENT OF CANADA.

Thomas A. Edison	8026	Oct. 17, 1877
		Issued Oct. 20, 1877.
Thomas A. Edison	9282	Oct. 19, 1878
Emile Berliner, assignee of W. Suess,	41901	Feb. 11, 1893

92

Also the following letters patent granted to Thomas A. Edison in the countries named, to wit:

Belgium—No. 43984, dated Jan. 31, 1878, and No. 45375, dated June 29, 1878.

Italy—No. 422, dated February 8, 1878, and No. ———, dated July 4, 1878.

Austria— , dated Jan. 1, 1879, and , dated Jan. 8, 1879.

Spain— , dated May 6, 1878.

Russia—No. 1161, dated February 15-27, 1882.

Norway— , dated Oct. 8, 1878.

93

Sweden— , dated Mar. 29, 1879.

Denmark—No. 1345, dated October 31, 1878.

Ludia— , deposited Mar. 20, 1879.

New South Wales— , dated Sept. 1, 1878.

Victoria— , dated August 13, 1879, and No. 2549, dated August 15, 1878.

PRINTED PUBLICATIONS.

The Electrical World for August 18, 1888, article on "Improved Gramophone," published at New York, N. Y.

94 Journal of the Franklin Institute, issue of December, 1895, pp. 419-437, printed and published at Philadelphia by the Franklin Institute.

Journal of the Franklin Institute, Vol. 125, p. 425, etc., printed and published in 1888 in Philadelphia by the Franklin Institute.

Journal of the Society of Telegraphic Engineers, Vol. 8, p. 393, etc., printed and published in the year 1879 in London, England.

Engineering, Vol. 27, p. 326, *et seq.*, published at London, Apr. 18, 1879, edited by W. H. Maw and J. Dredge.

Comptes Rendus, Vol. 85, p. 1082, *et seq.*, deposited
95 by Chas. Cros, April 30, 1877, description of phonographs and their operation.

La Nature, issue of May 4, 1879, p. 349, etc.

Journal of the Society of Telegraph Engineers and Electricians, Vol. 8, p. 303, etc., published at London, Apr. 9, 1870.

The Telephone, the Michrophone and the Phonograph, by Count du Moucel, chapter on Phonographs, pp. 235 to 261, etc., published at New York, 1879, by Harper & Bros.

The Speaking Telephone, Talking Phonograph and other novelties, by Geo. B. Prescott, Chap. 10, pp. 292 to 308, etc., published at New York City, 1878.

96 Elementary Treatise on Natural Philosophy, by A. P. Deschanel, part 3, pp. 824, 825, published at London in the year 1872 by Blackie & Son.

Le Rappel, issue of December 11, 1877, published at Paris, France.

Le Rappel, issue of January 15, 1878, published at Paris, France.

The World's Weekly Review of Scientists, Vol. 47, pp. 580, *et seq.*, published by Abbe Moigno, September, December, 1878.

Dana & Silliman's American Journal of Science

and Art, Vol. VIII, pp. 130-131, New Haven, Conn., 1874. 97

Le Telephone, Bibliothique des Merveilles, par le Comte Th. du Moucel, Paris, France, 1880, p. 366.

The Electrical World for November 12, 1887, published at New York, N. Y., article or 'Berliner's Gramophone.'

and were described, shown and patented in various other prior publications and patents, the dates and names of which are at present unknown to defendant; but defendant prays the right to insert by amendment to its answer said publications and patents when ascertained in the course of an investigation as to the prior knowledge and use and patents of said alleged improvements and inventions in which defendant is now earnestly engaged. 98

Seventeenth. Defendant further answering alleges on information and belief that in view of the state of the art at and before the time at which said Emile Berliner is alleged in said bill of complaint to have invented or discovered said alleged improvements and invention, said Emile Berliner was not the original or first inventor or discoverer of any material or substantial part of the alleged improvements and invention described or claimed in said Letters Patent No. 534543 and that said Letters Patent No. 534543 do not and did not describe, specify or claim any subject matter patentable at said time under the statutes of the United States, and that said letters patent are and always have been null and void. 99

Eigtheenth. Defendant further answering, alleges on information and belief that prior to the application in this country for a patent therefor and prior to and after the date of the issue of said Letters Patent No. 534543, said Emile Berliner and

100 his alleged assigns abandoned and had abandoned before the commencement of this suit to the public the alleged improvements and invention claimed to be patented in said Letters Patent No. 534543.

Nineteenth. Defendant further answering alleges on information and belief that prior to the time when the said Emile Berliner is alleged in said bill to have made the alleged improvements and invention described and claimed in said Letters Patent No. 534543, and that more than two years before the application of said Berliner in this country for letters patent aforesaid, said alleged improvements and invention were known and used by others in
101 this country, and were in public use and on sale in this country by divers persons, and among others by the following persons, to wit:

Thomas A. Edison, at Menlo Park, N. J., New York, N. Y., and elsewhere, present residence Llewellyn Park, N. J.

John F. Ott, at Menlo Park, N. J., Orange, N. J., New York, N. Y. and elsewhere present residence Orange, N. J.

Edward H. Johnson, at Menlo Park, N. J., New York, N. Y., and elsewhere, present residence Greenwich, Conn.

Charles Bachelor, at Menlo Park, N. J., New York,
102 N. Y., and elsewhere, present residence New York, N. Y.

John Kruesi, at Menlo Park, N. J., New York, N. Y. and elsewhere, present residence Schenectady, N. Y.

James U. McKenzie, at Menlo Park, N. J., New York, N. Y., and elsewhere, present residence Brooklyn, N. Y.

George H. Herrington, at Wichita, Kan., etc., present residence Wichita, Kan.

Isaac W. Heysinger, at Philiadelphia, Pa., and elsewhere, present residence Philadelphia, Pa.

C. S. Tainter, at Washington, D. C., and elsewhere, present residence Washington, D. C. 103

Maurice Joyce, at Washington, D. C., and elsewhere, present residence Washington D. C.

Christopher C. Reynolds, at Prescott, Ariz., and elsewhere, present residence Prescott, Ariz.

John C. English, at New York, N. Y., and elsewhere, present residence Camden, N. J.

Henry J. Hagen, at Orange, N. J., and elsewhere, present residence Orange, N. J.

Walter Miller, at Orange, N. J., and elsewhere, present residence Orange, N. J.

Chichester A. Bell, at Washington, D. C., and elsewhere, present residence Washington, D. C. 104

Sumner Tainter, at Washington, D. C. and elsewhere, present residence Washington, D. C.

W. W. Jacques at Newton, Mass., and elsewhere, present residence, Newton, Mass.

Charles E. Hadley, at Washington, D. C., and elsewhere, present residence Washington, D. C.

E. T. Gilliland, at New York, N. Y., and elsewhere, deceased.

George W. Littlehales at Pottsville, Pa., present residence Pottsville, Pa.

Gianni Bettini at New York, N. Y., and elsewhere, present residence Paris, France.

Leon F. Douglass, at Chicago, Ill., and elsewhere, present residence Philadelphia, Pa. 105

Cleveland Walcutt, at New York, N. Y., and elsewhere, present residence Paris, France.

Edward F. Leeds, at New York, N. Y., and elsewhere, present residence New York, N. Y.

John H. White, at Washington, D. C., present residence Washington, D. C.

Henri J. Lioret, at New York, N. Y., Washington, D. C., and elsewhere, present residence Paris, France.

Edward H. Amet at Chicago, Ill., Waukegan, Ill.,

106 and elsewhere, present residence Waukegan, Ill.

Alfred C. Clark, at New York, N. Y., Camden, N. J., and elsewhere, present residence Paris, France.

Eldridge R. Johnson at Camden, N. J., New York, N. Y. and elsewhere, present residence Philadelphia, Pa.

Victor H. Emerson, at New York, N. Y., Bridgeport, Conn., and elsewhere, present residence Newark, N. J.

William E. Gilmore at West Orange, N. J., and elsewhere, present residence Orange, N. J.

107 Thomas B. Lambert, at Chicago, Ill., and elsewhere, present residence Chicago Ill.

Henry G. Wolcott, at Fishkill, N. Y., and elsewhere, present residence Fishkill, N. Y.

George H. Stevens, at Toledo, Ohio, and elsewhere, present residence Toledo, Ohio.

A. N. Petit, at Newark, N. J., and elsewhere, present residence London, England.

James K. Reynard, at Newark, N. J., and elsewhere, present residence Newark, N. J.

Marshall C. Lefferts, at New York, N. Y., and elsewhere, present residence New York, N. Y.

Jonas W. Aylsworth, at East Orange, N. J., West Orange, N. J., and elsewhere, present resi-
108 dence East Orange, N. J.

George H. Burt, at New York, N. Y., Camden, N. J., and elsewhere, present residence Boston, Mass.

American Graphophone Co., at Washington, D. C., New York, N. Y., Bridgeport, Conn., and elsewhere, present residence at places aforesaid and, West Va.

Columbia Phonograph Co., at Washington, D. C., and elsewhere, present residence Washington, D. C.

Harry B. Cox, at Hartford, Conn., and elsewhere, last known residence Hartford, Conn. 109

Jos. E. Wassenich, at Chicago, Ill., and elsewhere, last known residence Chicago, Ill.

Werner Suess, at Washington, D. C., and elsewhere, last known residence Washington, D. C.

Edward L. Wilson, at Washington, D. C., and elsewhere, last known residence Washington, D. C.

Chas. W. Jones, at Washington, D. C., Philadelphia, Pa., and elsewhere, last known residence Philadelphia, Pa.

John D. Smoot, at Philadelphia, Pa., and elsewhere, present address Berlin, Germany. 110

Albert T. Armstrong, at New York, N. Y., and elsewhere, deceased.

Frederick Geirling, at Philadelphia, Pa., and elsewhere, present address London, England.

W. Barry Owen, at Philadelphia, Pa., and elsewhere, present address, London, England.

O. P. Ladow, at Philadelphia, Pa., New York, N. Y., and elsewhere, present address, New York, N. Y.

R. A. Glostzer, at Washington, D. C., Philadelphia, Pa., and elsewhere, present address, Berlin, Germany.

William Darby, at Philadelphia, Pa., and elsewhere, present address, Philadelphia, Pa. 111

Werner Suess, at Washington, D. C., Philadelphia, Pa, New York, N. Y., and elsewhere, deceased, last known residence Washington, D. C.

Emile Berliner, at Washington, D. C., Philadelphia, Pa., New York, N. Y., and elsewhere, present residence Washington, D. C.

T. Commerford Martin, at Washington, D. C., Philadelphia, Pa., and New York, N. Y., present residence New York, N. Y.

112 Joseph Wetzler, at Washington, D. C., Philadelphia, Pa., New York, N. Y., and elsewhere, present residence, London, England.

Carl J. Hohenstein, at New York, N. Y., and elsewhere, present residence New York, N. Y.

Chas. R. Cross, at Boston, Mass., and elsewhere, present residence Boston, Mass.

David W. Brown, at Washington, D. C., and elsewhere, present residence Washington, D. C.

W. W. Jacques, at Washington, D. C., New York, N. Y., and elsewhere, present residence Newton, Mass.

Mark E. Deering, at Cleveland, O., and elsewhere,
113 present residence at Cleveland, O.

William McMahon, at Rahway, N. J., and elsewhere, present residence at Rahway, N. J.

Eustace Oxley, at Boston, Mass., and elsewhere, present residence at Boston, Mass.

Wm. Bruening, at East Orange, N. J., and elsewhere, present residence East Orange, N. J.

and by divers other persons in this country, the names and residences of which persons are not at present known to defendant, but defendant prays leave to insert such names and residences, together with the places, in its answer when ascertained in the course of an investigation in which defendant
114 is still earnestly engaged.

Twentieth. That said Berliner having acquiesced in the rejection by the Patent Office of certain claims set forth in his application for said Letters Patent No. 534543, as will fully appear from the file-wrapper and contents of said patent when produced, he and his assigns are estopped from claiming a contruction of the patent and its claims broad enough to include the devices made and sold by defendants.

Twenty-first. For the purpose of deceiving the

public, the description and specification filed by the 115
patentee, said Emile Berliner, in the Patent Office, was made to contain less than the whole truth relative to his said alleged invention and discovery, and more than is necessary to produce the desired result. The said patentee, Emile Berliner, surreptitiously and unjustly obtained the said patent for that which was, in fact, invented by others who were each using reasonable diligence in adapting and perfecting the same, to wit: Werner Suess, and the other persons, who, in Paragraph Nineteenth hereof, are each alleged to have known and used said alleged improvements and invention in this country, and to have had the same in public use 116
and on sale in this country more than two years before the application of said Berliner in this country for said letters patent therefor.

Twenty-second. Defendant further answering alleges that said letters patent are inoperative and invalid by reason of the patentee, said Emile Berliner, claiming as his own invention and discovery more than he had a right to claim as new; and by reason of said patentee claiming as his own the inventions of others set forth and described in the prior patents and publications enumerated in Paragraph Sixteenth hereof.

Twenty-third. Defendant further answering al- 117
leges that before said alleged invention and discovery of said Emile Berliner was patented in United States by said Letters Patent No. 534543, granted February 19, 1895, the same was patented and caused by said Emile Berliner to be patented in foreign countries, by reason whereof under §4887 of the Revised Statutes of the United States, said letters patent of the United States were limited to expire at the same time with said foreign patents and each of them, and with the one having the shortest term; that the foreign patents pre-

118 viously granted and previously patenting said alleged invention and discovery in foreign countries, and limiting the term of said letters patent of the United States as aforesaid, are as follows:

LETTERS PATENT OF GREAT BRITAIN.

No. 15232 of Nov. 8, 1887 to Emile Berliner, for fourteen years from said date, which patent and the term thereof expired on Nov. 8, 1901.

No. 7204 of May 15, 1888, to Emile Berliner, for fourteen years from said date, which patent and the term thereof expired
119 on May 15, 1902.

LETTERS PATENT OF FRANCE.

No. 186827 of Nov. 8, 1887 to Emile Berliner, for fifteen years from said date, which patent and the term thereof expired on Nov. 8, 1902.

No. 190,602 of May 15, 1888, to Emile Berliner, for fifteen years from said date, which patent and the term thereof expired on May 15, 1903.

No. 207090 of July 19, 1890, to Emile Berliner, for
120 fifteen years from said date, which patent and the term thereof expired July 19, 1905.

LETTERS PATENT OF GERMANY.

No. 45048 of Nov. 8, 1887, to Emile Berliner, for fifteen years from said date, which patent and the term thereof expired on Nov. 8, 1902.

No. 47099 of May 16, 1888, to Emile Berliner, limited to expire and it and its term did so expire, on Nov. 7, 1902, with said patent No.45048 being an addition thereto. 121

No. 53622 of Nov. 20, 1889, to Emile Berliner, limited to expire and it and its term did so expire, on Nov. 7, 1902, with said patent No. 45048, being a second patent of an addition thereto.

LETTERS PATENT OF CANADA.

No. 41901 of Feb. 11, 1893 to Emile Berliner, for the term of six years from said date, which patent and the term thereof expired on Feb. 11, 1899. 122

Wherefore defendant alleges that said Letters Patent of the United States have long since expired and are not now in force or effect, and had expired before the commencement of this suit in equity; by reason whereof, neither complainants nor either of them are entitled or have ever been entitled to an injunction or any other relief against this defendant, and by reason whereof this Court of equity has not, and never has had jurisdiction of this suit, and by reason whereof complainant had at the time of the commencement of this suit an adequate remedy at law. 123

Defendant further answering alleges that said Emile Berliner before fil[illegible] an application in the United States for said Letters Patent No. 534543, filed an application in Canada on May 5, 1891, as assignee of Werner Suess for Letters Patent of Canada, for the invention described and claimed in said Letters Patent No. 534543, and especially in claims 5 and 35 thereof, and in his petition for said

124 Letters Patent of Canada, said Emile Berliner declared that Werner Suess had invented said alleged new and useful improvements in gramophones, and that the same were not known or used by others before the invention thereof by said Werner Suess; that thereafter and upon said application and petition of said Emile Berliner, Letters Patent of Canada, No. 41901, of February 11, 1893, were issued to said Emile Berliner, assignee of said Werner Suess for the term of six years for said alleged new and useful improvements in gramophones described and claimed in said Letters Patent No. 534543; that said Canadian Letters Pat-
125 ent No. 41901 expired on February 11, 1899, with the expiration of the term of six years for which the same had been granted. Wherefore the defendant alleges that said Emile Berliner was not the inventor of any invention described or claimed in said Letters Patent No. 534543, and especially in claims 5 and 35 thereof, and that said Letters Patent No. 534543, under §4887 of the Revised Statutes of the United States could not and did not continue in force subsequent to the expiration of said Canadian Patent on February 11, 1899, as aforesaid, and have always been null and void.

Twenty-fourth. Defendant further answering
126 prays the same benefit of the facts and things herein set forth as if for the reason thereof it had demurred to the said bill of complaint where a demurrer would have been proper, and the same benefit thereof as if it had specially pleaded to said bill where a plea would have been proper.

Twenty-fifth. Defendant upon information and belief denies every allegation in said bill contained not herein already admitted or denied.

All of which statements and defences this defendant is ready to aver, maintain and prove as this

Honorable Court shall direct, and prays hence to be dismissed with its reasonable costs in this behalf most wrongfully sustained. 127

LEEDS & CATLIN COMPANY,

(Seal: Leeds & Catlin Company, New York. Incorporated 1899.) by E. F. Leeds, Pres.

Louis Hicks,
Solicitor and Counsel for Defendant.

State of New York, } ss.:
County of New York, }

Edward F. Leeds, being duly sworn, says that the defendant herein, Leeds & Catlin Company is a corporation organized and existing under and by virtue of the Laws of the State of New York, and that he is president thereof, and therefore makes this verification; that he has read the foregoing answer and knows the contents thereof, and that the same is true of his own knowledge, except as to the matters therein stated to be alleged upon information and belief, and that as to those matters he believes it to be true. 128

E. F. LEEDS.

Subscribed and sworn to before me this 20th day of December, 1905 }

T. P. Dalton, 129
[NOTARY'S SEAL] Notary Public,
Kings Co.

Cert. filed in New York Co.
(Answer filed Dec. 21, 1905.)

130 IN THE CIRCUIT COURT OF THE UNITED STATES,

SOUTHERN DISTRICT OF NEW YORK.

In Equity, No. 8797.

Suit on Berliner Gramophone Patent No. 534543.

VICTOR TALKING MACHINE COMPANY, and the United States Gramophone Company,
131 Complainants,

vs.

LEEDS & CATLIN COMPANY,
Defendant.

The replication of the Victor Talking Machine Company and the United States Gramophone Company, complainants, to the answer of Respondent, Leeds & Catlin Company.

These repliants, saving and reserving unto themselves all and all manner of advantage and exception to the manifold insufficiencies of said answer
132 of the respondent, Leeds & Catlin Company, for replication thereunto say, that they will aver and prove their said bill to be true, certain and sufficient in law to be answered unto, and that the said answer of the respondent, Leeds & Catlin Company, is uncertain, untrue and insufficient to be replied unto by these repliants; without this that any other matter or thing whatsoever in the said answer contained, material or effectual in the law to be replied unto, confessed and avoided, traversed or

denied, is true; all of which matters and things 133
these repliants are and will be ready to aver and prove as this Honorable Court shall direct; and humbly pray, as in and by their said bill they have already prayed.

Sgd. HORACE PETTIT.
Of Counsel for Complainants.

February 3d, 1906.
Stimson & Williams,
Solicitors for Complainants.
[Replication filed February 7, 1906.]

Order to Show Cause.

CIRCUIT COURT OF THE UNITED STATES, 134

SOUTHERN DISTRICT OF NEW YORK.

In Equity, No. 8797.

Suit on Berliner Gramophone Patent No. 534543.

VICTOR TALKING MACHINE COMPANY, and the United States Gramophone Company,
Complainants,

vs. 135

LEEDS & CATLIN COMPANY,
Defendant.

And now, to wit: this 24th day of March, A. D., 1906, the complainants having filed their bill of complaint, upon the application of complainants' counsel, and upon the affidavits of Harry Cobb Kennedy, verified March 23, 1906, Albert C. Middleton, verified March 23, 1906, and John A. Fagan,

136 verified March 24, 1906, and upon the exhibits filed in connection therewith and in support thereof, it is this day

Ordered that a preliminary injunction, in conformity with the prayer in said bill of complaint, issue out of and under the seal of this Court on the sixth day of April, A. D. 1906, unless the defendant shall show cause before me, on the 6th day of April, A. D. 1906, at ten o'clock in the forenoon, or as soon thereafter as counsel can be heard, in the Court rooms of the United States Circuit Court for the Southern District of New York, in the Federal Building, in the Bor-
137 ough of Manhattan, City and State of New York, why said preliminary injunction should not be issued against the defendants in the above entitled cause, as prayed in said bill of complaint; and it is further

Ordered, that a copy of this order and affidavits referred to herein be served upon the defendant; that the answering affidavits, if any, to be used by the defendant in opposition to the granting of said preliminary injunction at the hearing on this order to show cause, be filed in the office of the Clerk of this Court, on or before five o'clock on the afternoon of March 31st, 1906; and that the affidavits, if any, of the complainants in rebuttal, to be used
138 by the complainants at the hearing on this order to show cause, be filed in the office of the Clerk of this Court before five o'clock on the afternoon of April 5th, 1906.

(Sgd.) E. HENRY LACOMBE,
U. S. C. J.

Affidavit of John A. Fagan Sur-Motion for Preliminary Injunction. 139

UNITED STATES CIRCUIT COURT,

SOUTHERN DISTRICT OF NEW YORK.

In Equity, No. 8797.

Suit on Berliner Gramophone Patent, No. 534543.

VICTOR TALKING MACHINE COMPANY and the United States Gramophone Company, Complainants, 140

vs.

LEEDS & CATLIN COMPANY, Defendant.

City of New York, } ss.:
County of Kings, }

John A. Fagan, New York City, State of New York, being duly sworn according to law, deposes and says as follows: 141

I reside at 327 Second Street, in the Borough of Brooklyn, in the City of New York, State of New York. In the Fall of 1903, I was in the employ of the Victor Distributing & Export Company, of New York, N. Y., and while in their employ I called at the place of business of the Leeds & Catlin Com-

142 pany, of No. 53 East 11th Street, in the Borough of Manhattan, City and State of New York, for the purpose of buying from said Leeds & Catlin Company a talking machine and sound records. The date upon which I called at the said place of business of the Leeds & Catlin Company was November 30, 1903, and at that time I purchased from the said Company a flat disc talking machine and five flat disc sound records for said talking machine. The said talking machine which I purchased was known as the "Ohio Talk-o-Phone" and on one side of the cabinet of said machine the following words appeared, namely, "Ohio Talk-o-Phone, Toledo,
143 Ohio, U. S. A.". This talking machine which I purchased at that time consisted of an oak cabinet with a hinged cover, which cover carried a spring motor on the inside and a turntable on the outside mounted upon the spindle of said motor. A swinging arm is pivoted to its outer end by a universal joint to the outer end of a bracket ridgidly mounted upon said cabinet, this swinging arm being of metal, and carrying at its inner end a sound box, which sound box communicates with an amplifying horn also carried by said swinging arm, but removable therefrom.

The flat disc sound records which I purchased at that time were made of black hard material,
144 having in their faces spiral grooves of even depth, with lateral undulations in the sides thereof made by the recorded sounds. These flat disc records have a gold seal impressed centrally in their front faces, upon which appears the words "Leeds Records," together with the data for identifying the number and name of the selection appearing upon the record. These records are adapted to be

used only in connection with the talking machines 145
of the flat disk record type, such as the one I purchased, as above stated, and such talking machine is only adapted for use in connection with the flat disc sound record, like the one I purchased. And said machines and records are sold for use in connection with each other, and were so sold to me by the said Leeds & Catlin Company on November 30, 1903, as before stated. The machine, as sold to me, consisted of the said cabinet, as I have described, and the swinging arm, the sound box, an amplifying horn and a crank for winding up the motor, which parts accompany this affidavit, and are marked "Complainants' Exhibit, Defendant's Machine."

The flat disc sound records which I purchased 146
from the Leeds & Catlin Company on the 30th of November, 1903, as before said, are five in number, and are marked "Complainants' Exhibit, Defendants' Sound Records."

For the said talking machine I paid the Leeds & Catlin Company on November 30, 1903, the sum of $31.50, and for the five disc records I paid the said Leeds & Catlin Company the sum of $2.45, and received from the said Leeds & Catlin Company a bill for these goods, containing the following items, namely:

To one Ohio Talking Mach.	31.50		147
to 5 Leeds Disc Rds.	2.45	$33.95	

Reed Paymt
Leeds & Catlin Co.

145a The said bill is attached hereto and marked "Complainants' Exhibit, Leeds & Catlin Bill."

Signed John A. Fagan.

Subscribed and sworn to before me this 24th day of March, 1906.

Signed Otto F. Peterson,
Notary Public,
Kings Co., N. Y.

UNITED STATES CIRCUIT COURT,

SOUTHERN DISTRICT OF NEW YORK.

146a

In Equity, No. 8797.

Suit on Berliner Gramophone Patent No. 534543.

VICTOR TALKING MACHINE COMPANY and the United States Gramophone Company,
Complainants,

vs.

LEEDS & CATLIN COMPANY,
147a Defendant.

"Complainants' Exhibit, Leeds & Catlin Co. Bill."
(Signed) Otto F. Peterson,
Kings Co., N. Y.

Complainants' Exhibit, Leeds & Catlin Co. Bill. 145b

No claims allowed unless made immediately on receipt of goods. Claims for Breakage, Loss or Detention to be made on the Transportation Companies.

Our responsibility ceases when we obtain a receipt for goods shipped in good order.

Leeds & Catlin Co.

Making the Loudest and Clearest Phonograph Records and Edison Phonograph Supplies at 53 East Eleventh Street.

Terms C. O. D.

Conveyance 146b

New York, Nov. 30, 03

Sold To J. Fagan

To one Ohio Talking Mach.	31.50	
To 5 Leeds Disc Rds	2.45	
		$33.95

Reed Paymt 147b

Leeds & Catlin Co.

148 **Affidavit of Albert C. Middleton sur Motion for Preliminary Injunction.**

CIRCUIT COURT OF THE UNITED STATES,

SOUTHERN DISTRICT OF NEW YORK.

In Equity, No. 8797.

Suit on the Berliner Gramophone Patent, No. 534543.

149 VICTOR TALKING MACHINE COMPANY and the United States Gramophone Company,
Complainants,

vs.

LEEDS & CATLIN COMPANY,
Defendant.

Commonwealth of Pennsylvania, } ss.:
City and County of Philadelphia, }

150 Albert C. Middleton, being duly affirmed, deposes and says as follows:

I am Secretary of the Victor Talking Machine Company, a corporation organized and existing under the laws of the State of New Jersey, and having its special place of business in the City of Camden, in said State, one of the complainants herein, and have been since its organization in October, 1901.

The said Victor Talking Machine Company manufactures disc talking machines, and records therefor, under United States Letters Patent to Emile Berliner, No. 534543, dated February 19, 1895, for

a gramophone, which patent I am informed and be- 151
lieve, as to Claims 5 and 35, has been held valid by the Circuit Court of Appeals for the Southern District of New York in a certain suit by the Victor Talking Machine Company and the United States Gramophone Company against the American Graphophone Company, the opinion of said Circuit Court of Appeals for the Second Circuit having been entered on or about March 9, 1906.

The Victor Talking Machine Company manufactures and sells various styles of talking machines and sound records constructed in accordance with the invention of said patent, and accompanying this affidavit is one style of talking machine and a disc
sound record so manufactured and sold by said 152
Victor Talking Machine Company, and which are marked "Complainants' Exhibit, Complainants' Machine," and "Complainants' Exhibit, Complainants' Sound Record." Said complainants' machine is the style of machine known as a flat disc record talking machine, which comprises a cabinet containing a motor and upright spindle which projects centrally through the top of the cabinet and carries a turn-table. A swinging arm is supported at its outer end by a laterally projecting rigid arm mounted upon the cabinet, the outer ends of the swinging arm and the rigid arm being connected by the universal joint to allow a free vertical and 153
horizontal movement of the arm. The free end of the swinging arm is provided with means for carrying the sound box, which latter connects with an amplifying horn also carried by said swinging arm. Complainants' Exhibit, Complainants' Sound Record, is a flat disc of indestructible material, in the face of which is a spiral groove of even depth having lateral undulations representing the sounds to be reproduced. The stylus of the sound box engages the record groove of complainants' sound record, and when the latter is rotated with the turn-

154 table the stylus is laterally vibrated to set up vibrations in the sound box diaphragm corresponding to those recorded in the sound record groove, and at the same time said spiral record groove propels the stylus and reproducing apparatus automatically across the surface of the sound record independent of any other means.

The Victor Talking Machine Company has manufactured and sold this style of talking machine and sound record ever since its incorporation in October, 1901.

The said Complainants' Exhibit, Complainants' Machine, is manufactured for use only in connection with flat disc records similar to Complainants'
155 Exhibit, Complainants' Sound Record, and the said sound records are manufactured for use only in connection with machines similar to said complainants' machine.

I have also examined Complainants' Exhibit, Defendant's Machine, and Complainants' Exhibit, Defendant's Record, and find that they not only embody the same structure, but, except as to non-essential and immaterial changes not effecting the general construction or operation of the device, they are duplicates of complainants' machine and complainants' record. It would be useless for me to describe defendant's machine and defendant's
156 sound record in detail, as it would simply be a repetition of the description which I have heretofore given of complainants' machine and complainants' sound record, and, furthermore, the operation is the same, and both in complainants' and defendant's machines and records the machine is only capable of use in connection with a record of this description, and the record is only capable of use in connection with a machine of this description, and when in use and operation the spiral groove of even depth with lateral undulations in the sides of said groove not only impart to the

stylus which travels in said groove lateral undulations, which lateral undulations are imparted to the diaphragm to reproduce the recorded sounds, but said spiral groove automatically propels the stylus and the reproducing apparatus across the face of the record from the beginning to the termination of the composition or other matter recorded upon said record. 157

In other words, there is absolutely no essential difference in the construction of complainants' and defendant's machines and sound records, nor in their operations.

(Signed) ALBERT C. MIDDLETON.

Affirmed and subscribed to before me this twenty-third day of March, A. D. 1906. 158

(Sgd.) Alexander Park,
[SEAL.] Notary Public.
Commission expires Feb. 6, 1909,
604 Stephen Girard Bldg.,
Philadelphia, Pa.

159

160 **Affidavit of Harry Cobb Kennedy Sur Motion for Preliminary Injunction.**

CIRCUIT COURT OF THE UNITED STATES,

SOUTHERN DISTRICT OF NEW YORK.

In Equity, No. 8797.

Suit on the Berliner Gramophone Patent, No. 534543.

VICTOR TALKING MACHINE COMPANY and the United States Gramophone Company,
161 Complainants.

vs.

LEEDS & CATLIN COMPANY,
Defendant.

Commonwealth of Pennsylvania, } ss.:
City and County of Philadelphia, }

Harry Cobb Kennedy, being duly sworn according
162 to law, deposes and says, as follows:

I am a member of the Bar, and an assistant to Horace Pettit, Esquire, of Counsel for the complainants in the above entitled cause, and am familiar with this litigation and the pleadings herein. The bill of complaint herein was filed October 1st, 1904, and on November 7, 1904, the defendant appeared by counsel. On December 19, 1904, the defendant demurred to the bill of complaint, which demurrer was duly set down for argument on December 2, 1904, and a note of issue duly filed to bring said demurrer on for argument at the earli-

est term of Court after which it had been set down 163
for argument. The cause was on the calendar for the April, 1905, Term of this Court, but the Court adjourned before it was reached for argument, and it went over to the October Term, 1905. On October 23, 1905, over a year after the bill of complaint had been filed, the demurrer was argued, and on October 31, 1905, an opinion was filed by Judge Holt overruling the demurrers, and on November 22, 1905, on order was signed and filed in conformity with said opinion, and defendant's answer was filed on December 21, 1905, the replication being filed on Februray 7, 1906.

This suit is for infringement of the Berliner 164
Patent No. 534543, for a gramophone, a copy of which is hereto annexed and marked "Complainants' Exhibit, Berliner Patent in Suit," and when the present suit was brought to issue on February 7, 1906, another suit for the infringement of this patent has been argued on appeal before the Circuit Court of Appeals for this Circuit, and was then awaiting the decision of said Court. This other suit, to which I refer was entitled the Victor Talking Machine Company and United States Gramophone Company vs. The American Graphophone Company, instituted in the United States Circuit Court for the Southern District of New York, in
Equity No. 8627. This suit against the American 165
Graphophone Company was vigorously defended and came on to final argument and full pleadings and proofs before Judge Hazel on June 5 and 6, 1905, and was taken under advisement by the Court, and on September 28, 1905, an opinion was filed by Judge Hazel holding Claims 5 and 35 of said Patent, No. 534543, in suit, valid and infringed by defendant's talking machine, also ordering an injunction, with costs, to complainants. A copy of said opinion by Judge Hazel is attached hereto

166 and marked "Complainants' Exhibit, Judge Hazel's Opinion." An application for re-hearing was argued on October 27, 1905, before Judge Hazel, and was refused, and on the same day a final decree was entered for the complainants, together with an order suspending the operation of the decree until adjudication by the Court of Appeals. Thereafter, an appeal was duly prosecuted and was argued on its merits before the United States Circuit Court of Appeals for the Second Circuit on January 17 and 18, 1906, and on March 9, 1906, the Circuit Court of Appeals, *per curiam*, affirmed the opinion of the lower Court sustaining the validity of Claims 5 and 35 and holding that
167 these claims were infringed by the defendant's structure. A copy of said *per curiam* of the Court of Appeals is attached hereto and marked "Complainants' Exhibit, Court of Appeals *Per Curiam*." When the present suit of the Victor Talking Machine Company, et al, vs. The Talk-o-Phone Company was brought to issue on February 7, 1906, the said case against the American Graphophone Company had been taken under advisement by the Court of Appeals and had not been decided.

The patent in suit is for a gramophone or talking machine, that is to say, a machine for reproducing recorded sounds. The sounds to
168 be reproduced are recorded in a flat disc sound record by means of spiral grooves of even depth containing lateral undulations conforming to the sound waves produced by the sounds to be recorded. This flat disc sound record is carried by a turn-table rotated by means of a suitable motor. To reproduce the sounds, a sound box or reproducing apparatus is employed. A swinging arm, suitably supported at one end, carries this sound box at its other end, the said sound box communicating with a suitable amplifying horn carried also by said swinging arm. The sound box

contains a diaphragm which is set in vibration by a 169
stylus suitably connected therewith, which stylus enters the record groove and is laterally vibrated thereby. These lateral vibrations being reproduced in the diaphragm which sets up vibration within the sound box and amplfying horn similar to these recorded on the flat disc sound records, and also similar to the sound waves by which the record groove was made in the flat disc sound record.

Claims 5 and 35 of the patent in suit read, as follows:

> "5. The method of reproducing sounds from a record of the same which consists in vibrating a stylus and propelling the same 170
> along the record by and in accordance with the said record, substantially as described."
>
> "35. In a sound reproducing apparatus consisting of a traveling tablet having a sound record formed thereon and a reproducing stylus shaped for engagement with said record and free to be vibrated and propelled by the same, substantially as described."

The United States Circuit Court of Appeals, in affirming the decree of the Court below in the *per curiam* filed March 9, 1906, stated as follows:

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> "In affirming this decree we do not find it necessary to add anything to be careful and exhaustive discussion of the issues which will be found in Judge Hazel's opinion, with one single exception."

This single exception is, that without discussing the question raised in the Court below disposing of the defence of prior public use, and without expressing any definite opinion either way as to the manner in which it was decided by the Court below, the Court of Appeals held that on another ground,

172 namely that of continuing applications, his defence of prior public use would not avail the defendant, so that the manner in which Claim 5 and 35 were construed by the Court below thereby becomes the opinion of the Court of Appeals.

Prior to the invention of the patent in suit the reproducing styles of same reproducing machines was fed across the surface of the round record by a feed screw, or other means independent of the record itself, and the main distinction of the invention of the patent suit over the prior art is in the manner of the propelling of the stylus across the record, which is not accomplished by an auxiliary feed
173 screw, but is due to the operating engagement of the stylus point with the record groove itself, independently of other means, or as Judge Hazel states in his opinion sustaining the validity and holding infringement of Claims 5 and 35:

> "Complainants contend, and the proofs show, that the stylus attached to the diaphragm is arranged so as to permit the same to vibrate laterally, and that owing to lateral undulations in the walls of the record grove, a desirable swaying motion is imparted to the reproducer diaphragm. Concededly, the lateral undulations in the record
> 174 automatically guide or propel the stylus and diaphragm in its course over the disc from the outer circumference toward the center, and the stylus travels in an apparently direct radial path while at the same instant of time it is pulsated or incited by the sound waves. The principle of operation in the Berliner machine is thought to be essentially different from that of the machine of Bell & Tainter. In the latter, an auxiliary joint or feed screw was necessary, as already stated, to effectuate the required passage of

the record over the joint of the stylus, or to 175
cause the stylus and reproducer diaphragm to travel across the surface of the record. In complainant's patent, on the other hand, it is shown that the lateral vibrations of the stylus point and the propelling of the same over the surface of the record without mechanical assistance and through the means of the groove alone was the primary object of the inventor." * * * "but from what has already been said regarding the Bell & Tainter Patent, it is manifest that the principle of Berliner's invention rests upon the practicability of propelling the stylus in the 176
groove across the surface of the record without a feed screw or other mechanism. By such adaptation to what is known in the art as a zig-zag record (Complainant's record) certain imperfections in the talking machines were overcome, and sound, when reproduced, was rendered intelligible. There was, I think, patentable novelty in the method which accomplished the results stated." * * * The essence of such claims would seem to include a sound record which, when in juxtaposition with a diaphragm and stylus propelled in the manner described, is thereby enabled to 177
successfully accomplish the primal object and purpose of the invention."

In the said suit against the American Graphophone Company so decided by the Court of Appeals as aforesaid, I have examined the exhibits of complainants' and defendant's machine and records, and am conversant with the same, and except for certain specific details of structure, non-essential changes of material and very slight changes in ornamentation or style, Complainants' Exhibit, De-

178 fendant's Machine, is a practical duplicate of Complainants' Exhibit, Complainants' Machine, as manufactured under the patent in suit. And the structure embodied in Complainants' Exhibit, Defendant's Sound Record, as compared with Complainants' Exhibit, Complainants' Sound Record, is also the same flat disc sound records made of hard, indestructible material, in the faces of which are impressed a spiral record groove of even depth with lateral undulations, which record groove serve the two-fold purpose of vibrating the stylus to produce the necessary vibrations in the diaphragm of the sound box, and also to automatically propel the stylus in the groove across the surface of the record
179 without a feed screw or other mechanism independent of the record itself.

I have also examined the exhibits introduced in this cause against The Talk-o-Phone Company, namely, Complainants' Exhibit, Complainants' Machine; Complainants' Exhibit, Complainants' Sound Record; Complainants' Exhibit, Defendant's Machine, and Complainants' Exhibit, Defendant's Sound Record, and I find that Complainants' Exhibits, Complainants' Machine and Sound Record are the same as the said Complainants' Exhibits, Complainants' Machine and Sound Record introduced in evidence in said suit against the American
180 Graphophone Company, so decided by the Court of Appeals. Comparing the exhibits in this present suit, I find that Complainants' Exhibits, Defendant's Machine, is essentially the same as Complainants' Exhibit, Complainants' Machine, introduced in evidence in this suit, and also is the same as Complainants' Exhibit, Defendant's Machine, introduced in evidence in said suit against the American Graphophone Company. That is to say, in all of these exhibits, there is a cabinet or casing containing a spring motor, the upright spindle of which projects centrally through the top of the

cabinet and carries a turn-table. From one side of 181
the cabinet there is a projecting arm. In a bearing at the outer end of this arm is mounted a swinging arm capable of swinging horizontally and vertically on a universal joint, while the inner and free end of this swinging arm carries a sound box, with which is connected an amplifying horn supported and carried also by said swinging arm. Complainants' Exhibit, Defendant's Sound Record, is the same structurally as Complainants' Exhibit, Complainants' Sound Record, offered in evidence in this suit, and likewise the same as the Complainants' and Defendant's Sound Record before the Court in said suit against the American Graphophone Company so decided by the Circuit Court of Appeals, 182
that is to say, it is a flat disc sound record of hard material having in its face a spiral groove of even depth with the lateral undulations. This Defendant's Sound Record in the present suit is adapted, as in the other devices, to be carried and rotated by the turn-table, and the stylus of the sound box engaging the spiral groove therein causes lateral vibrations in the diaphragm and these vibrations of the diaphragm set up the sound waves in the sound box and amplifying horn while at the same time the sound box and stylus are automatically propelled across the surface of the record by reason of the record groove itself, and independently of 183
any other means or mechanism.

As there is absolutely no difference between the construction of defendant's machine and sound record and the invention set forth and claimed in Claims 5 and 35 of the patent in suit, as far as the principle of Berliner's invention as to vibrating the diaphragm and propelling the stylus and the sound reproducer by and in accordance with the groove of the sound record across the surface of the record, and without a feed screw or other mechanism, and in view of the fact that defendant's machine and

184 sound record offered in evidence in this suit do vibrate the stylus and propel it and the sound reproducer across the surface of the record in the patent in suit and as it is done in Complainants' Exhibit, Complainants' Machine, and Complainants' Sound Record in said suit against the American Graphophone Company, so decided by the Court of Appeals, in my opinion, the said Complainants' Exhibit, Defendant's Machine and Sound Record, in this suit contain all the means and instrumentalities called for by Claims 5 and 35 of the patent in suit and constitute an infringement of these claims.

The Complainants' Exhibit, Defendant's Machine and Defendant's Sound Record, are manufac-
185 tured for use in connection with each other, and are so used and in my opinion are incapable of use in any other connection in a practical manner.

(Sgd.) HARRY COBB KENNEDY.

Sworn and subscribed to before me this 23d day of March, 1906.

(Sgd.) Alexander Park,
Notary Public,
Commission expires 2/6/09,
604 Stephen Girard Bldg.,
Philadelphia, Pa.

[SEAL.]

[Note: For copy of Complainants' Exhibit, Berliner Patent in suit, No. 534543, see *infra*, p. 452.]
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(Copy of Decision of Judge Hazel of September 28, 1905.) 187

(Sgd.) Alexander Park,
[SEAL.] Notary Public,
Commission expires 2/6/09,
604 Stephen Girard Bldg.,
Philadelphia, Pa.

UNITED STATES CIRCUIT COURT,
SOUTHERN DISTRICT OF NEW YORK.

In Equity.

188

VICTOR TALKING MACHINE COMPANY and United States Gramophone Company,
Complainants,

vs.

AMERICAN GRAPHOPHONE COMPANY,
Defendant.

189

HORACE PETTIT, of Counsel for Complainants.
ELISHA K. CAMP, for Defendant.
PHILIP MAURO, C. A. L. MASSIE, of Counsel.

HAZEL, J.:

The bill is in equity and relates to the infringement of Letters Patent No. 534543, issued February 19, 1895, to Emile Berliner, assignor to complain-

190 ants, on application filed March 30, 1892, for improvements in a talking machine commonly known as the gramophone. The apparatus to which the improvements relate, is constructed to record and reproduce vocal sounds. The patent has 35 claims, of which Claim 5, for the process, and 35, for construction of the recording and reproducing apparatus, alone, are involved. Such claims read as follows:

> 5. "The method of reproducing sounds from a record of the same, which consists in vibrating a stylus and propelling the same along the record by and in accordance with
191 the said record, substantially as described.
>
> 35. "In a sound reproducing apparatus, consisting of a travelling tablet having a sound record formed thereon and a reproducing stylus shaped for engagement with said record, and free to be vibrated and propelled by the same, substantially as described."

At the date of the invention in suit it was not new to record sound and articulated words and reproduce the same by suitable mechanical agencies. Numerous defences are interposed in the answer, viz.: anticipation; prior use; abandonment and non-
192 patentability. The objection is also urged that the Court is without judisdiction, on the ground that complainants, before the suit was instituted, agreed in writing to release the defendant from the payment of damages and to grant to it a license to use, sell and manufacture the patented machine provided the patent in suit was held valid by the Court. Such objection, however, which is erroneously sought to be sustained upon the authority of Root vs. Railroad Co., 105 U. S., 180, is without merit. The principle is unassailable that where mere damages are sought to be recovered in an ac-

tion for infringement of a patent, a court of equity will not interfere. But where the bill, alleging infringement of an unexpired patent, demands damages and permanent injunction, equitable relief in a proper case will not be refused. A prior agreement by which the interested parties mutually agree upon terms of settlement on condition that the patent in controversy is sustained by the Court, cannot upon principle and authority deprive a court of its inherent power and jurisdiction (McMillan vs. St. Louis & Miss. Valley Transp. Co., 18 Fed., 260; Guaranty Co. vs. Green Cove Rd. Co., 129 U. S., 137; to the same effect see Doyle vs. Continental Ins. Co., 94 U. S., 535; Insurance Co. vs. Morse, 20 Wall, 445). It is insisted on the part of the defendant that the evidence conclusively shows that there was a public use of the invention for more than two years prior to the application for the patent; that the inventor abandoned his right to the claims in suit by a postponement of them, and that in an earlier application for a patent, he described such claims in his specifications without, however, claiming them. The complainants contend that the alleged prior public use was for the purpose of experiment, and that there was no abandonment in fact. To properly understand the defences, it is necessary to consider the state of the art and to briefly indicate the principles of the various talking machines commonly known and mentioned in the record. The references relied upon to anticipate the involved claims are, first, the Franklin Institute lecture by the patentee, on May 16, 1888; second, a publication by him in the Electrical World, on November 12, 1887; and, third, the patents to Bell & Tainter, No. 341214, dated May 4, 1886, and to W. Suess, assignor to Emile Berliner, No. 427279, issued May 6, 1890. In the British Patent to Edison, No. 1644, dated April 24, 1878, for recording and reproducing vocal sounds, the air vibrations were recorded by a

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196 system of indentations upon a pliable or yielding material, as, for instance, a thin sheet of metal or tin foil. The foil was ordinarily placed over a grooved substance and received impressions of the voice through the instrumentality of a moveable, inelastic diaphragm, having at its end an indenting point or stylus. In order to effectuate the reproduction of sound vibrations, the point of the stylus was essentially kept in constant contact with the revolving record, cylinder or disc. This was accomplished by a mechanical device which propelled the stylus across the surface of the record. In the graphophone patent, issued to Bell & Tainter, the record was engraved or cut in wax-like or
197 amorphous material. The form of cutting or engraving was in a spiral groove of varying depth, the side of the walls sloping toward the bottom. The stylus, which curved in a downward direction, was kept in the groove by gravity and as the record rotated it was vibrated vertically "in the direction of its length." It is shown by the evidence that the graphophone in one form, which is illustrated in the drawings attached to the patent, required mechanical means to propel the record past the reproducer diaphragm and stationary stylus. In another form a moveable stylus attached to the diaphragm was propelled by an auxiliary device across the record
198 so as to retain the stylus point in constant contact with the vertical undulations. These different forms of talking machines are disclosed by the patents or prior date. The common form of style being adapted to record and reproduce vocal sounds at the instance of the user, and the other to merely reproduce sound vibrations as had previously been recorded in accordance with the process of the patentee.

In the patent to Emile Berliner, No. 564586, issued on July 28, 1896, application filed November 7, 1887, the process of recording and reproducing

sound vibrations differs essentially from the method 199
used in the phonograph and the graphophone. The specification described a process by which the sounds were inscribed upon a layer of non-resisting material; which was afterwards copied in a non-yielding material, from which the sounds were reproduced. The specification says:

> "The original record, as well as the copy of the same, is thus obtained as an undulatory line of even depth, as distinguished from the line of varying depth obtained by the ordinary phonograph and graphophone."

It is not disputed that such mode or process was 200
a new and meritorious invention and that it was not merely a patent for the functional effect of the machine in connection with which it was used. The earlier specification does not claim the method nor the details of construction of the claims in controversy; hence it is contended by the defendant, as will presently appear, that there was a surrender or waiver thereof. In the patent in suit two features of the invention are mentioned, one concerning the process or mode of recording sound upon a record, the other as to the construction of the apparatus. Complainants contend, and the proofs show, that the stylus attached to the diaphragm is arranged so as to permit the same to vibrate lat- 201
erally, and that owing to lateral undulations in the walls of the record groove, a desirable swaying motion is imparted to the reproducer diaphragm. Concededly, the lateral undulations in the record automatically guide or propel the stylus and diaphragm in its course over the disc from the outer circumference toward the center, and the stylus travels in an apparently direct radial path while at the same instant of time it is pulsated or incited by the sound waves. The principle of operation in the Berliner machine is thought to be essentially different from

202 that of the machine of Bell & Tainter. In the latter, an auxiliary joint or feed screw was necessary, as already stated, to effectuate the required passage of the record over the point of the stylus, or to cause the stylus and reproducer diaphragm to travel across the surface of the record. In complainants' patent, on the other hand, it is shown that the lateral vibrations of the stylus point and the propelling of the same over the surface of the record without mechanical assistance and through the means of the groove alone was the primary object of the inventor. In the Suess Patent is contained a description corresponding to the features of Claim 35, in suit. The primary object of Suess, an employee
203 of Berliner, however, was merely to construct a suitable pivotal support for the diaphragm and stylus, so as to assist such device in its passage across the record. It is expressly stated in the specification of the Suess Patent that the invention relates to improvements in the reproducing apparatus of Berliner, and that the construction and mounting of the stylus form no part of the invention. The improvement of Suess, therefore, is not an anticipation. Defendant insists that the Bell & Tainter specifications fully described the Berliner process and specific combination. Such specification says:

> 204 "The invention consists, fourthly, in loosely mounting the reproducing style so that it is free to follow the record." And further: "Preferably the reproducing style, or rather what may be called the 'head' of the reproducing instrument is mounted on an universal point, and the style is pressed against the record by the yielding pressure of a spring or weight."

Stress is placed upon the language quoted; but from what has already been said regarding the Bell & Tainter Patent, it is manifest that the principle

of Berliner's invention rests upon the practicability 205
of propelling the stylus in the groove across the surface of the record without a feed screw or other mechanism. By such adaptation to what is known in the art as a zigzag record (Complainants' Record) certain imperfections in the talking machines were overcome, and sound, when reproduced, was rendered more intelligible. There was, I think, patentable novelty in the method which accomplished the results stated. The broad claims in suit in my judgment cannot be restricted to a record of even depth, such as described in the specification. The essence of such claims would seem to include a sound record, which, when in juxtaposition with a 206
diaphragm and stylus propelled in the manner described, is thereby enabled to successfully accomplish the primal object and purpose of the invention.

The next defences, prior use and abandonment, may be considered together. The proofs show that the patentee used his machine and gratuitously delivered a lecture on relation thereto in the City of Philadelphia on May 16th, 1888, to an audience of about two hundred persons, more than two years before the application in suit, and that prior thereto in the year 1887, he published an article in a periodical, the "Electrical World," relating to his said discovery. He expressly stated in his lecture that 207
the exhibit machine was the hasty result of a new mechanism and the accomplishment should be measured by its future possibilities and not wholly by the demonstration. It is not claimed that there were any sales of the instrument at the time of the exhibition and lecture; indeed, it is conceded that the apparatus was not sold nor used by other persons, until about six years later, when the patent in suit was issued. The mere exhibition of the machine to an assembled audience to hear an explanation of one's invention was not fatal to the patent

208 under the authorities (Shaw vs. Cooper, 32 U. S., 292; Egbert vs. Lippman, 104 U. S., 333; Elizabeth vs. Pavement Co., 97 U. S., 126; Eastman vs. Mayor, etc., of City of New York, 134 Fed., 844). That a complete disclosure was made of the described plan of mounting the reproducer diaphragm and stylus in the specification attached to the application filed November 7th, 1887, is freely admitted. Such disclosures consisted of a machine constructed in accordance with the drawing (Figure 10) of the earlier application. The diaphragm and stylus were mounted or suspended upon a conveyor arrangement having rollers. The inventor did not allow his invention, with his consent, to be embodied by other
209 persons in a completed machine, and no profit or gain, until the patent was granted, was realized as a result of the invention. Moreover, the evidence and circumstances justify the assumption that the exhibition of the apparatus was purely experimental and in no sense a public use within the meaning of the statutes. In Elizabeth vs. Pavement Co., *supra*, the Supreme Court considered the meaning and application of the words public use. In the opinion it is stated:

> "But if the inventor allows his machine to be used by other persons generally, either
> 210 with or without compensation, or if it is, with his consent, put on sale for such use, then it will be in public use and on public sale, within the meaning of the law. * * * Nicholson did not sell it, nor allow others to use it or sell it. He did not let it go beyond his control. He did nothing that indicated any intent to do so. He kept it under his own eyes, and never for a moment abandoned the intent to obtain a patent for it. In this connection it is proper to make another remark. It is not a public knowledge of his

invention that precludes the inventor from 211
obtaining a patent for it, but a public use or
sale of it."

This doctrine undoubtedly has application to the facts here. As already appears, the patent in suit was issued upon a later application than Patent No. 564586. Why the broad claims of the former were not made a part of the earlier application and specification does not appear. Defendant broadly contends that the fact of the omission by the patentee to claim the invention in the earlier application, considered in connection with the above mentioned publication in the "Electrical World," and public exhibition, was an abandonment and forfeit- 212
ure thereof. It is true that the Revised Statutes (S. 4886) require the inventor to point out and distinctly claim the improvement or combination which he claims is his invention or discovery. If he omits so to do, such improvement or combination being apparent on the face thereof, he is presumed to have abandoned the same and to have dedicated to the public that which is not claimed (Miller vs. Brass Co., 104 U. S., 350; James vs. Campbell, 104 U. S., 356; Stirrat vs. Excelsior Mfg. Co., 61 Fed., 980; McBride vs. Kingman, 97 Fed., 217). But it may be stated as a general rule that "a patent is never invalidated by the fact that the invention 213
claimed in it was described but not claimed in a patent granted subsequently to the making of the application for the patent secondly issued, but before it was granted." This principle as enunciated by Judge Blatchford in Singer vs. Braunsdorf, 7 Blatch., 521, is thought to apply. See also Thomson-Houston Elec. Co. vs. Elmira & Horseheads Ry Co., 69 Fed., 257. In any event, it cannot justly be claimed from the facts, that Berliner has done anything to indicate an intention to waive or surrender his discovery. To merely withhold a patent from the public has never been considered an aban-

214 donment, and the adjudged cases uniformly hold that an inventor may have a patent for an invention described but not claimed by him, in a prior patent to himself (Graham vs. McCormick, 11 Fed., 859; Vermont Farm Machine Co. vs. Marble, 19 Fed., 307; Eastern Paper Bag Co. vs. Standard Paper Bag Co., 30 Fed., 63). In the latter case the language of the Supreme Court, in Miller vs Brass Co., James vs. Campbell, *supra*, was interpreted as applying to re-issues under the statute. It was broadly held that the description of another invention in a prior patent by the same inventor does not forfeit his right to afterward take out a patent for such invention. In this case, the patent on the earlier
215 application, as has been stated, was issued subsequent to the patent in suit. I am unable to perceive how the patentee's failure to claim the invention described in his earlier application can be construed as an abandonment thereof. It is true an abandonment of an invention by a patentee to the public is a question of fact and may be established by the patentee's intention to abandon, or by inferences consistent therewith (Rifle and Cartridge Co. vs. Arms Co., 118 U. S., 22; Planing Machine Co. vs. Keith, 101 U. S., 479). The burden, however, is upon the defendant to show that the invention was abandoned (Wyeth vs. Stone, Fed. Cases, No. 18,
216 107). Nor, indeed, should evidence of abandonment rest upon doubtful or controverted inferences. The publication in the "Electrical World" is not entitled to the probative weight claimed by the defendant. The rule is that the prior publication, in order to anticipate, must fully and clearly describe the invention so as to enable the skilled in the art to completely understand it and reproduce the apparatus without assistance from the patentee (Badische Ainlin & Soda Fabrik vs. Kalls, 94 Fed., 163; Cohn vs. Corset Co., 93 U. S., 366). The prior publication, based upon the article mentioned, is

not within the rule stated. The elicited facts are thought to be foreign to sustaining the asserted defences, and hence, infringement not being controverted, complainants are entitled to a decree adjudging the validity of the patent and its infringement and for an injunction against the use of the machines or devices made in violation of Claims 5 and 35 of the patent in suit with costs. 217

UNITED STATES CIRCUIT COURT OF APPEALS,

SECOND CIRCUIT.

Before—LACOMBE, TOWNSEND and COXE, Circuit Judges. 218

VICTOR TALKING MACHINE COMPANY and another,
Complainants-Appellees,

vs.

AMERICAN GRAPHOPHONE COMPANY,
Defendant-Appellant.

219

This cause comes here upon appeal from a decree of the Circuit Court, Southern District of New York, sustaining the validity (and finding infringment) of U. S. Letters Patent 534543 granted February 19, 1895, to Emile Berliner for the "Gramophone." The opinion in the Circuit Court is reported in F. R.

Per Curiam.

In affirming this decree we do not find it necessary to add anything to the careful and exhaustive

220 discussion of the issues which will be found in Judge Hazel's opinion with one single exception. In disposing of the defence of prior public use based upon the lecture and exhibition before the Franklin Institute, the Circuit Court, apparently relied mainly upon the proposition that what took place there was not a public use, but rather an experimental one. Without discussing the questions thus raised or expressing any definite opinion either way, we prefer to dispose of the alleged prior public use by means of the application of Berliner which was filed six months prior to the Franklin Institute lecture, and which eventuated
221 in Patent 564586, issued subsequent to the patent in suit. The specifications in that application (for 564586) were full enough to warrant the making of the claims here in controversy (5 and 35); at any time the application might have been amended by adding such claims, and in our opinion it is immaterial that instead of thus amending it, he took the broader claims on another application filed while the first was pending. The second may fairly be considered a continuation of the first, and thus Berliner's application antedates the public use, and the facts will not sustain the contention that he abondoned his invention here in suit.

The decree is affirmed.

222

A true copy.

[SEAL.] (Signed) WM. PARKIN,
Clerk.

Circuit Court of the United States 223
Southern District of New York.
In Equity, No. 8797.
Suit on the Berliner Gramophone
Patent, No. 534543.

Victor Talking Machine Co., *et al.*
vs.
Leed & Catlin Co.

Complainants' Exhibit, *Per Curiam.*
(signed) ALEXANDER PARK,
[SEAL.] Notary Public, 224
Commission Expires Feb. 6, 1909.
604 Stephen Girard Bldg.,
Philadelphia.

(Filed March 27, 1906.)

225

226 CIRCUIT COURT OF THE UNITED STATES,

SOUTHERN DISTRICT OF NEW YORK.

VICTOR TALKING MACHINE COMPANY, *et al.*, vs. LEEDS & CATLIN COMPANY.	In Equity No. 8797.
VICTOR TALKING MACHINE COMPANY, *et al.*, 227 vs. TALK-O-PHONE COMPANY.	In Equity No. 8859.

State and County of New York, ss.:

Louis Hicks, being duly sworn, says: that he is solicitor and counsel for the Leeds & Catlin Company and for the Talk-o-Phone Company, the defendants above named. These two suits are brought upon Letters Patent of the United States No. 534543, dated February 19, 1895, to Emile Berliner. The suit against the Leeds & Catlin Company was brought in July, 1904, and the defendant duly appeared on the August, 1904 rule day. The suit against the Talk-o-Phone Company was brought at about the end of September, 1904, and the defendant appeared on the November, 1904, rule day. On September 30, 1904, in the suit against the Leeds & Catlin Company, and on December 19, 1904, in the suit against the Talk-o-Phone Company, demurrers were filed to the bills. As explained in the annexed correspondence between Horace Pettit, Esq., and

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me as counsel for the respective parties to these suits by reason of complainant's neglect, the demurrers were not reached for argument until October 23, 1905. The demurrers having been overruled prior to November 8, 1905, complainant delayed entering the orders overruling the demurrers and directing defendants to answer until requested so to do by deponent on or about November 22, 1905. Thereupon defendants filed their answers on December 21, 1905, but complainant neglected to file its replications on the January, 1906 rule day, and unreasonably delayed filing its replications until the February, 1906 rule day. Hence, these suits became at issue February 5, 1906, but complainants have taken no testimony whatever, although nearly three months have elapsed since the January, 1906 rule day. As appears from deponent's letters to Mr. Pettit, defendants vigorously protested against this delay. During the time of the delay complainant brought its suit against the American Graphophone Company to final hearing, secured a decision from Judge Hazel and an affirmance thereof by the Circuit Court of Appeals. As appears from my second letter to Mr. Pettit, dated November 22, 1905, I had repeatedly informed Mr. Pettit that I had discovered evidence which would without question prove the invalidity of that patent and I requested Mr. Pettit to proceed at once with the prosecution of its case against the Talk-o-Phone Company, in order that the question of the invalidity and nullity of the patent might, at an early date, be passed upon by the Court. 229 230 231

I was present at the argument on final hearing in the suit of the Victor Talking Machine Company *et al* vs. the American Graphophone Company on Berliner Patent No. 534543, on June 5 and 6, 1905, before Judge Hazel, and on defend-

232 ant's motion for rehearing before Judge Hazel on October 27, 1905, and also on the argument of the appeal in that suit in the Circuit Court of Appeals, on January 17 and 18, 1906. I have also examined the record and the briefs filed and used in the Circuit Court and the Circuit Court of Appeals in that suit. It appears that the defenses made were the following:

1. Anticipation by Bell & Tainter Patent No. 341-214.

2. Prior public use for more than two years before the application, based on Berliner's lecture
233 delivered May 16, 1888, before the Franklin Institute.

3. Abandonment, based on the article in the Electrical World for November 12, 1887.

4. Abandonment by acquiescence in Suess' United States Patent No. 427279.

5. That the patent in suit No. 534543 is not based on Berliner's invention, the construction shown being that shown in the Suess patent, and not that shown in Berliner's application filed November 7, 1887, for Patent No. 564586.

6. Claim 5 is not for a patentable method.

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It appears from the record in that suit that the bill was filed January 4, 1904; defendant appeared February 1, 1904; the answer was filed March 15, 1904, and the replication was not filed until August 12, 1904. A motion to apportion time was made and an order apportioning time to take testimony was filed February 7, 1905.

Complainants' *prima facie* case consisted of the bill of complaint; seven agreements, dated September 2, 1895 (2), October 4, 1895, October 15, 1895, November 1, 1895, September 28, 1901, and October

5, 1901, in regard to the title of the complainants to 235
the patent in suit, uncertified copies of which were stipulated in evidence without proof; the agreement of December 8, 1903 between the Victor Talking Machine Company and the American Graphophone Company, consent decrees in favor of the Victor Company, *et al.*, vs. Lit Brothers and against the Universal Talking Machine Company, *et al.*, on Berliner Patent No. 548623, recently held by Judge Hazel not infringed in a suit against the American Graphophone Company at final hearing; the file wrapper and contents on Berliner Patent No. 564586; Patent Office copies of the drawings of said Patent No. 564586; Berliner Patent in suit 236
No. 534543; Edison Patents Nos. 200521 and 227-679; stipulations admitting incorporation of complainants and defendant; the use of uncertified copies of the title papers mentioned and the use of Patent Office copies of patents; Complainants' Exhibits of Defendant's Machine and record, and stipulation that the same were made and sold subsequent to the patent and prior to the suit; the deposition of Joseph Lyons; and the deposition of Charles K. Haddon.

In rebuttal complainant took the deposition of Emile Berliner and the deposition of Rudolph M. Hunter and offered in evidence "Complainants' Exhibit Berliner Model" and a certified copy of Ber- 237
liner Patent No. 564586.

Defendant's case consisted of the answer; deposition of Shelton T. Cameron; deposition of Emile Berliner; Letters Patent of the United States Nos. 341214 and 341288, to Bell & Tainter; No. 427279 to Suess; No. 564586 to Berliner; No. 688739 to Jones; No. 562694 to Amet; English Patent No. 1644, of 1878 to Edison; French Patent No. 205-491 to Suess; article on Berliner's Gramophone in the Electrical World for November 12, 1887; pa-

238 per read May 16, 1888 by Emile Berliner on the Gramophone before the Franklin Institute; file wrapper and contents of patent in suit No. 534543; copies of affidavits of E. R. Johnson, verified December 14, 1900 and January 5, 1903, and stipulation as to translation of said Suess French patent.

Said Suess French patent is identical in all respects including the specification, drawings and claims with U. S. Letters Patent to Suess No. 427279.

Deponent introduces in evidence in each of the above entitled suits, and refers thereto and makes the same a part of this affidavit, a copy of the
239 agreement of December 8, 1903, between the Victor Talking Machine Company and the American Graphophone Company; Berliner Patent No. 564586; copies of the depositions of Emile Berliner taken by the defendant and by the complainant in rebuttal in said suit; Letters Patent of the United States No. 341214 and 341288 to Bell & Tainter; No. 427279 to Suess; English Patent No. 1644 of 1878 to Edison; a copy of the article on Berliner's Gramophone in the Electrical World for November 12, 1887; a copy of the paper read by Emile Berliner on the Gramophone before the Franklin Institute on May 16, 1888; a certified copy of the file wrapper and contents of the patent in suit No.
240 534543. For the drawings forming part of the article in the Electrical World for November 12, 1887, and of the paper read by Mr. Berliner on May 16, 1888, I beg leave to refer to the Exhibits filed in said suit between the Victor Company, *et al.*, and the American Graphophone Company, and annex hereto typewritten copies of the text or printed matter thereof.

As new matter, I offer in evidence on behalf of each defendant in the two above entitled suits a copy hereto annexed of the correspondence between complainants' counsel, Mr. Pettit, and me; the affi-

davit of T. Commerford Martin, verified November 241
10, 1905; the affidavit of Joseph Wetzler, verified November 9, 1905; a copy of an affidavit verified by Louis Hicks June 8, 1905, and two proposed orders based upon said affidavit, together with a letter dated June 10, 1905, by Horace Pettit, and a letter dated June 12, 1905, by Louis Hicks to Judge Hazel, with reference to said two proposed orders, neither of which was ever signed so far as deponent is informed; also an article in the Electrical World for August 18, 1888, entitled "The Improved Gramophone."

In addition, as new matter I offer in evidence certified copies of letters patent of France to Emile 242
Berliner, No. 186827, of November 8, 1887; No. 190602, of May 15, 1888, and No. 207090, of July 19, 1890, together with correct, true and full translations thereof hereto annexed, which translations I have personally made, being acquainted with the French language.

I further offer in evidence as new matter, certified copies of German Letters Patent to Emile Berliner No. 45048, of November 8, 1887; No. 47099, of May 16, 1888, and No. 53622, of November 20, 1889, together with correct, true and full translations thereof hereto annexed, which translations I have personally prepared, being acquainted with the German language. 243

I also offer in evidence as new matter a certified copy of Canadian Patent No. 41901, of February 11, 1893, to Emile Berliner, a certified copy of the assignment thereof from W. Suess to E. Berliner, and a certified copy of the petition, oath, powers of attorney, receipt, correspondence and wrapper relating to the application for said Canadian Patent.

I annex hereto copies of the material parts of the Law of France, of Germany, Great Britain and Canada, in force at the time the aforesaid letters patent of France, Germany and Canada were ap-

244 plied for and granted, and at the time English Letters Patent No. 15232 of 1887, No. 7204 of 1888, to Emile Berliner, which are herewith offered in evidence, were applied for and granted.

It appears from Vols. 8 and 9 of the Official Journal, published at the Patent Office, Sale Branch, London, England, for July, 1887, to June, 1888, that the application for English Patent No. 15232, of November 8, 1887, was filed November 8, 1887; that the complete specification was accepted December 10, 1887, and published during the week ending December 31, 1887, at a price of 11d. per copy; that the patent thereon was sealed February 17, 1888.

245 It furthermore appears from Vols. 9 and 10 of the same journal for January, 1888, to December, 1888, that the application for English Letters Patent No. 7204, of May 15, 1888, was filed May 15, 1888; that the complete specification was accepted June 16, 1888, and published during the week ending July 7, 1888, at a price of 6d. per copy; and that the patent thereon was sealed August 24, 1888.

I have for the past ten years been actively engaged in the practice of patent law, and during the greater part of that time I have devoted my attention largely to patents and litigation relating to talking machines. The patent in suit, No. 534543, to Berliner states that "one feature of my inven-

246 tion has reference to improvements in the method of recording sound by tracing upon a fatty film, etc.; while the other features of my invention have reference to the construction of the details of both the recorder and the reproducer of the gramophone. Each of these features of improvement are designed to overcome certain difficulties, and to avoid certain imperfections heretofore met with in the operation of the gramophone" (p. 1, lines 17-31). On page 3, beginning at line 3 and continuing down to line 109, Berliner described those features of his invention which have reference to the recorder or

recording sound-box. On page 5, beginning at line 247
34 and continuing down to line 102, Berliner describes those features of his invention which have reference to the reproducer or reproducing sound-box. The recorder consists of a diaphragm mounted in a casing, of a lever or spring constituting or carrying a stylus, the lever being composed of two parts joined or placed at right angles, the one to the other, and of means for connecting the lever or spring with the diaphragm, and of regulating the tension between the diaphragm and spring. The recording stylus is normally curved, but is unbent and becomes straight when adjusted upon the record tablet preparatory to making a record. One end
of the spring or lever is made fast to the casing hold- 248
ing the diaphragm and the other end is free to vibrate. For the purpose of dampening the individual vibrations of the lever carrying the stylus, one or two bands of soft rubber are slipped over the broad portion of the stylus. The lever and stylus may extend across the diaphragm upon a line constituting a chord but in the arrangement shown in figure 4 the adjustment can be such that they may extend across the diaphragm upon a line which would constitute a diameter of the circle of the diaphragm. This eccentricity of the lever and recording stylus is no essential part of Berliner's recorder or recording sound-box, but, as will hereafter more 249
clearly appear, is a mere modification or improvement thereon, which is claimed in claims separate and distinct from Claims 6, 7, 8, 9, 10 and 16, for example, wherein the main and principal features of the recorder are claimed without reference to the eccentricity referred to.

The reproducer or reproducing sound-box consists of a diaphragm mounted in a frame or casing, of a leaf spring similar to the leaf spring of the recorder, and which likewise faces with its flat side the face of the diaphragm up to a point beyond the

250 center of the latter, and is then turned or twisted at right angles and crosses the casing edgewise (p. 5, lines 43-47). The lever or leaf spring of the reproducer carries at its free end the reproducing stylus, attached in the manner shown and described. One end of the leaf spring or lever of the reproducer is secured to the casing and the other end is free to vibrate, and the leaf spring or lever is said to be elastic in two directions at right angles to each other, by reason of the right angular twists given to the leaf spring at its middle (p. 5, lines 51-52). At the point where the leaf spring passes over the center of the diaphragm it is connected with the diaphragm and in such manner that the ten-
251 sion between the leaf spring and the diaphragm can be regulated (p. 5, lines 61-71). In order to dampen the individual vibrations of the spring, as in the case of the spring of the recorder, a piece of soft rubber may be used to embrace the end of the spring (p. 5, lines 59-61). In order to reduce the volume of sound, one or more perforated and exchangeable diaphragms may be placed in the neck or tube leading from the diaphragm (p. 5, lines 90-102).

That part of Berliner's invention relating to his recorder is illustrated in Figures 4 and 5, and that part relating to his reproducer or reproducing
252 sound-box is illustrated in Figures 6 and 7. Reference to Figure 1 shows that in the recording gramophone shown in Figure 1, the improvement in the details of the recorder or the recording sound-box are illustrated, and the recording stylus is a leaf spring consisting of two parts at right angles one to the other, connected with the center of the diaphragm and having a stylus which is normally curved but which has become straight when brought into adjustment with the record tablet. Reference to Figure 3, showing the reproducing apparatus as a whole shows that Berliner's improvements in the

details of the reproducer or reproducing sound-box have been incorporated in Figure 3 where the reproducing sound-box consists of the diaphragm and the leaf spring or lever consisting of a spring bent at about the middle so that the two parts are at right angles the one to the other, the spring being connected to the center of the diaphragm and at one end being attached to the casing, and at the other end being free to vibrate and carrying at the free end the reproducing stylus affixed in the manner shown and described. Claims 24, 25, 26, 27, 28, 29, 30, 31, 33, 34 and 35 claim in one form or another Berliner's invention consisting of improvements in the details of his reproducer or reproducing sound-box. 253 254

Referring to German Patent No. 53622, of November 20, 1889, and to the annexed translation thereof, it appears that Berliner by this patent patented in Germany that part of his invention set forth in Patent No. 534543, constituting his improvements in details of the reproducer. The drawing of the German patent is substantially identical with Figures 6 and 7 of the patent in suit No. 534543. Reference to the specifications of the two patents is hardly necessary to make this appear more clearly than it does from a comparison of the drawings alone. However, referring to the translation hereto annexed of this German patent, it appears that there are described the same diaphragm mounted in a frame or casing, the same leaf spring fastened at one end and free to vibrate at the other end and bent somewhere about the middle at right angles, so that the fastened part extends with its flat part parallel to the diaphragm while the free end of the spring stands with the principal face perpendicular to the diaphragm. The spring and the diaphragm are likewise connected at the center of the diaphragm as in the United States patent, and means for adjusting the tension between the spring and the diaphragm are likewise provided. 255

858

256 The reproducing stylus carried by the free end of the spring is secured in the same manner as in the United States patent. And finally the function and mode of operation of the reproducer of the German patent and the reproducer of the United States patent are identical, and the two patents disclose and claim the one and the same invention.

Referring now to Berliner French Patent No. 207090, of July 19, 1890, and to the annexed translation thereof, it appears that by this patent Berliner patented in France not only the features of his invention having reference to the construction of the details of his reproducer or reproducing sound box, but also the features having reference
257 to the construction of the details of his recorder or recording sound-box. Figures 6 and 7 of the United States Patent No. 534543 show the identical reproducer shown in Figures 3 and 4 of the French patent and Figures 4 and 5 of the United States patent show the same recorder as that shown in Figures 1 and 2 of the French patent, the only difference being substantially in the detail, that in the United States patent the lever and stylus are eccentric, while in the French patent the lever and stylus of the recorder are along the line of a diameter. The essential features of the two recorders are identical, and the invention of the
258 French patent is the principal invention of the United States patent as regards the recorder as well as the reproducer. Referring to the annexed translation and drawings of the French patent, it appears that in the reproducer there is the same diaphragm in the same casing; the same spring or lever composed of two parts placed at right angles the one to the other, or bent at right angles, the same rings of rubber to dampen the individual vibrations of the springs, the same connection between the spring and the center of the diaphragm, like means for regulating the tension between the

spring and the diaphragm, the same means 259
for attaching the reproducing stylus at the end of the spring, the same perforated diaphragms in the neck or tube of the reproducer (Figure 3, D), to render the tone more clear, and that the reproducer of the United States and of the French patent operate according to the same principle, perform the same function, have the same details of construction, and are embodiments of one and the same invention. With reference to the recorder shown in the French patent, we have the same diaphragm in the same casing or frame, the same spring or lever composed of two parts the one at right angles to the other (and 260
here it will be noticed that in the reproducer of the United States and of the French patent, the spring is bent or twisted so as to make the parts at right angles, while the spring or lever of the recorders are composed of two parts joined together so as to be at right angles the one to the other), the same rings of rubber about the stylus or spring of the recorder, similar connection of the spring to the center of the diaphragm, and similar means for regulating the tension between the spring and the diaphragm, the same stylus curved in normal position and unbent so as to become straight when brought in contact with the record tablet. In the recorder of the French patent as well as in the re- 261
producer, there is the same fastening of one end of the spring to the casing of the diaphragm and the same freedom of vibration of the other end of the spring so that the recorder of the United States and French patents embodying one and the same invention, are constructed on the same principle, perform the same function or mode of operation, and are made up of the same details of construction. The principal invention of the recorder of the United States patent is found in the French

262 patent, and the principal invention of the French patent is found in the United States patent and claimed in each, although, as appears from the French Patent Law hereto annexed, claims of a French patent form no essential part of the patent, the requirement being that there be a specification of the invention forming the subject of the patent applied for.

Referring to letters Patent of Canada, No. 41901, of February 11, 1893, to Emile Berliner, assignee of Werner Suess, for improvements in gramophones, it appears that the drawings and description thereof are substantially identical with
263 the description and drawings of the United States Patent No. 427279 of May 6, 1890, to Emile Berliner, assignee of Werner Suess, for improvements in gramophones. The claims of the two patents are, however, radically different. The United States patent sets forth five claims, each one of which except Claim 4, is for a combination, comprising in addition to other elements, a freely swinging support frame, or, as Judge Hazel puts it in his opinion in the suit against the American Graphophone Company on Berliner Patent No. 534543, "a suitable pivotal support," and a weight adjustable on said frame to counterbalance the reproducer mechanism; while Claim 4 is for a com-
264 bination comprising the freely swinging supporting frame and a system of links, in addition to other elements. It, therefore, appears that the claims of the United States patent are exceedingly narrow, and Judge Hazel held that the "improvement of Suess, therefore, is not an anticipation," saying:

> "In the Suess patent is contained a description corresponding to the features of Claim 35 in suit. The primary object of Suess, an employee of Berliner however, was merely to construct a suitable pivotal

support for the diaphragm and stylus, so as to assist such device in its passage across the record. It is expressly stated in the specification of the Suess patent, that the invention relates to improvements in the reproducing apparatus of Berliner, and that the construction and mounting of the stylus form no part of the invention. The improvement of Suess, therefore, is not an anticipation." 265

In the record before Judge Hazel, letters patent of the United States No. 372786 of November 8, 1887, and No. 382790 of May 15, 1888, both granted to Emile Berliner, were not in evidence, and these patents are the ones mentioned in the Suess Patent No. 427279 (P. ls, 8-14), as the ones setting forth Berliner's "reproducing apparatus adapted for use in the method for recording and reproducing sounds" for improvements upon which Suess obtained his patent. Said Letters Patent Nos. 372-786 and 382790 to Berliner are herewith offered in evidence, and an examination of those two patents shows that Suess' invention was an original departure from the reproducing apparatus set forth in said Berliner patents. Had the said two Berliner patents been in evidence, Judge Hazel would have seen how marked was the improvement which Suess made upon Berliner's reproducing apparatus. The construction and mounting of the stylus, which, as Judge Hazel states, Suess declared to be "no part of the present invention" (p. 2, ls. 33-34), relate to the construction of the reproducer or reproducing sound-box merely. I have secured a certified copy of the application of Suess, assignor to Berliner, for Letters Patent No. 427279, and of the file-wrapper and contents of said patent, and it appears therefrom that the application was allowed as filed 266 267

268 without any amendment or correspondence whatever relating thereto. I concluded, and from correspondence had with the Patent Office, in regard thereto, I allege upon information and belief that a previous application had been made by Suess and abandoned, and that the subsequent application upon which the patent was issued was then made. I have, however, been unable to obtain a copy of the abandoned application from the Patent Office, the same or any information thereof having been refused.

Referring now to the claims of the Canadian patent, they are thirteen in number, and obviously the Canadian Patent No. 41901 covers broadly the in-
269 vention set forth in Claims 5 and 35 of the Berliner Patent in suit, No. 534543. Special reference is made to Claims 11, 12 and 13. A comparison of Claim 11 with the other claims of the patent shows that Suess claimed broadly the alleged invention of Berliner Patent No. 534543. As Judge Hazel said that "in the Suess patent is contained a description corresponding to the features of Claim 35 in suit," and as the drawings and specifications of the Suess United States and Canadian patents are substantially identical, it is unnecessary to point out further that the Suess Canadian patent discloses the alleged invention of Claims 5 and 35 of
270 the Berliner Patent in suit No. 534543. Hence, Claims 5 and 35 are limited to the special form of reproducing sound-box and stylus described in Patent No. 534543, and claimed therein and described in the French and German Berliner patents above referred to. On page 3 of the Canadian patent Suess says:

> "The stylus engaging with its point the record groove, is controlled by the walls of the latter, and, as will be hereinafter more fully shown, I rely upon this control of the

stylus by the walls of the record groove for the movement of the stylus across the face of the disc, there being no positive feeding mechanism for thus moving the stylus." 271

Referring to English Letters Patent No. 15232, of 1887, and comparing the description, drawings and claims thereof with letters patent of the United States No. 564586, to Berliner, granted July 28, 1896, but applied for November 7, 1887, and stating on its face that it was patented in England on November 8, 1887, by said English Letters Patent No. 15232 of that date, it appears that the two patents are for one and the same invention, except that the English patent, in addition to covering the matter of the United States patent, also covers the matter of Berliner's early United States Patent No. 372786, of November 8, 1887. This is too clear to require further discussion. It may be remarked in passing, however, that Claim 9 of the English patent is substantially identical with Claim 8 of the United States patent; that Claim 12 of the English patent is the same as Claim 9 of the United States patent; that Claim 13 of the English patent is the same as Claim 10 of the United States patent; that Claim 14 of the English patent is the same as Claim 13 of the United States patent, etc. The two patents, therefore, unquestionably cover the same invention. 272 273

In the United States Patent No. 564586, Berliner first describes the drawings showing his apparatus, from page 2, line 7, to page 3, line 54. He then describes the deposition of a suitable layer of ink upon the tablet and the making thereon of a phonautographic record by the recording machine and the copying of that record by photo-engraving, from page 3, line 55, to page 4, line 45. He then describes the centering of the copied record upon the metal disc, from page 4, line 46, to page 4, line 80. Berliner then states that "the stylus is then ad-

274 justed with its point in engagement with the outer end of the record groove, and the weight, 26, is allowed to descend. It will now be clear that the stylus will be forced possibly to follow the undulations of the record, and that the diaphragm vibrating under the stylus will emit the same sounds which produced the original record, which sounds can be distinctly heard at the ear-piece 34.

"Both the process and the apparatus thus far described may be modified in various ways without departing from the main features of my invention. So, for instance, I can dispense with the centering device and can rotate the record upon a stationary axis, if the diaphragm with its attached stylus is
275 mounted in a manner to make it follow the spiral record. An arrangement of this character is shown in Fig. 10. The reproducing disc 54 is in this case mounted as hereinbefore described, but without regard to the centering device. The support 7′ may be fixed in position so that the bevel-gear 9, mounted upon the same in the manner described with reference to Fig. 3, will turn without progressive motion. Bevel-gear 9 and with it the reproducing-disc 54, are rotated by a bevel-gear 14′ upon a shaft 6′, to which power is applied by a weight, as shown, or in any other suitable manner. The diaphragm-casing 31 is secured to a small truck 55 upon rails 56 ar-
276 ranged vertically above and parallel with a diameter of the reproducing-disc, and at such height above the same that the stylus 29 will be in engagement with the undulatory grooves of even depth which represent the record of sounds.

"The listener applies his ear to the ear-piece, and when the shaft 6′ is rotated the stylus and diaphragm will be forced to vibrate, as in the apparatus shown in Fig. 1, but will at the same time move with the truck 55 across the face of the disc 54. A tolerably good reproduction may also be obtained by simply holding one end of a reed be-

tween the teeth and the other pointed end of the same in engagement with the record-grooves while the disc is rotated." 277

It will be noticed that Berliner states that the apparatus or arrangement shown in Figure 10 is a mere modification of his process and apparatus "without departing from the main features of my invention." So in referring to Figure 10, on page 2, line 22, Berliner says: "Figure 10 is a sectional elevation of a modified form of my reproducing apparatus." Clearly, according to Berliner's statements, the modified arrangement shown in Figure 10 embodies the main features of his invention disclosed in the entire specification. This view was also taken by the Circuit Court of Appeals in the opinion affirming the decision of Judge Hazel in the suit of the Victor Company, *et al.*, vs. the American Graphophone Company. In that opinion the Circuit Court of Appeals said: 278

> "The specifications in that application (for 564586) were full enough to warrant the making of the claims here in controversy (5 and 35); at any time the application might have been amended by adding such claims, and in our opinion it is immaterial that instead of thus amending it he took the broader claims on another application filed while the first was pending. The second may fairly be considered a continuation of the first." 279

We have, therefore, in the United States two patents protecting the features of Berliner's invention set forth in his application for No. 564586, to wit: No. 534543 as to Claims 5 and 35 and the various claims of No. 564586.

It should be noticed that in Claims 17, 18, 19, 20, 21 and 22 of Patent No. 534543, Berliner mentions a "rotary tablet," while in Claim 35 Berliner speaks of a "traveling tablet." In the claims of

280 United States Patent No. 564586 (Claims 1, 2, 3, 4, 7, 8 and 13, for example), and in the claims of English Patent No. 15232, of 1887 (Claims 1, 4, 5 and 9, for example), the word "traveling" denotes a tablet or support which not only rotates, but also has a progressive movement of its center. Thus Claim 35, which the Circuit Court of Appeals says is a broad claim for the invention set forth in No. 564586, and therefore in said English Patent No. 15232 of 1887, follows the language of No. 564586 in the use of the word "traveling" and the expression "traveling tablet."

Claim 8 of No. 564586 reads as follows:

281 "8. In a gramophone, the combination of a sound-receiving sonorous body; with a pivoted stylus controlled by and controlling the same, and a support adapted to carry a phonautogramic recording-surface, or a copy of such record in solid resisting material, travelling in the plane of vibration of the point of the stylus; substantially as described."

Claim 9 of English Patent No. 15232 of 1887, reads as follows:

"9. In a gramophone, the combination of
282 a sound receiving diaphragm or other sonorous body; with a pivoted stylus controlled by a diaphragm, and controlling the same, and a support adapted to carry a phonautographic record sheet or a copy of such record, in solid resisting material, traveling in the plane of vibration of the point of the stylus, substantially as described."

Claim 35 in suit of Patent No. 534543 reads as follows:

"35. In a sound reproducing apparatus

consisting of a traveling tablet having a 283
sound record formed thereon and a reproducing stylus shaped for engagement with said record and free to be vibrated and propelled by the same, substantially as described."

Obviously the combination shown in the last Claim, 35, is but a mere modification of the combination shown in the two previous claims above set forth, 8 and 9. And that is what Berliner himself states and what the Circuit Court of Appeals has also held. Claims 5 and 35 of Patent No. 534543 therefore, protect the same invention as English Patent No. 15232 of 1887. 284

Referring to German Patent No. 45048 of November 8, 1887 and to the annexed translation thereof, and French Patent No. 186827 of November 8, 1887 and to the annexed translation thereof, it appears upon the face of these patents that they are for the same invention as English Patent No. 15232 of 1887, the French patent including the claims, being a mere translation thereof, and the German patent being for the same invention in slightly different language. The drawings of the English, French and German patents being all identical.

I have for several years past made a careful study 285
of talking machines, of patents relating thereto, and have frequently been called upon to give opinions with reference to patents relating to talking machines and to take a very active part in litigation based upon such patents. I have discussed the foregoing patents and the subject matter thereof with Mr. Edward F. Leeds, of Leeds & Catlin Company, and Mr. Harry Ensign of the Talk-o-Phone Company, experts in the talking machine art, and I believe that the conclusions above stated by me are correct, together with the reasons given therefor.

286 The Talk-o-Phone with the mechanical feed device (Exhibit A) herewith presented to the Court, was, in its general form, first suggested by me. My suggestion was based especially upon English Patent No. 1644, of 1878 to Edison, and especially on Figures 1-10 thereof and upon the other early letters patent herewith offered in evidence, showing the positive feeding mechanism for moving a reproducing stylus or other like instrument across the face of the record. As stated by Suess in his United States and Canadian patents in the apparatus shown by him there is "no positive feeding mechanism for thus moving the stylus across the
287 record." Complainants' counsel, Mr. Pettit, under date of March 10, 1906, as appears from his annexed letter to Rogers Manufacturing Company, claims that the mechanical feed device can have no useful function to perform and is a mere attempt to evade the Berliner patent. Obviously Mr. Pettit's contention is contrary to the fact, and is made for the purpose of injuring the Talk-o-Phone Company. I annex a copy of the description forming a part of the application filed on behalf of the Talk-o-Phone Company for letters patent covering the special features of its talking machine with the mechanical feed device. The first action of the
288 Patent Office thereon, dated March 8, 1906, shows that no objection is made by the Patent Office to Claims 8, 9, 10 and 16, covering the mechanical feed device of the Talk-o-Phone Company's Talk-o-Phone manufactured in accordance with the invention described in said application, and that only a formal objection has been made to Claim 17 for the same device. The claims mentioned, will, therefore be allowed and upon further action in the proceedings it is believed that all or nearly all of the remaining claims will be allowed.

I have been familiar with the product of the

Talk-o-Phone Company since the time of its incorporation. The Talk-o-Phone Company is now and has been engaged in the manufacture and sale of talking machines and is not and has not been engaged in the manufacture of sound records. 289

Referring to the Talk-o-Phone with the mechanical feed device, it appears from an inspection of Exhibit A, as well as from the specification of the application for a patent therefor hereto annexed, that the walls of the record groove cannot move the stylus across the face of the record and that the movement of the stylus across the face of the record groove is performed by the mechanical feed device. 290

LOUIS HICKS.

Subscribed and sworn to before me this 5th day of April, 1906.

T. P. Dalton,
Notary Public,
Kings Co.

[NOTARY'S SEAL.]

Cert. filed in New York Co.

291

292 CIRCUIT COURT OF THE UNITED STATES,

SOUTHERN DISTRICT OF NEW YORK.

VICTOR TALKING MACHINE COMPANY, *et al.*, vs. LEEDS & CATLIN COMPANY.	In Equity No. 8797.
VICTOR TALKING MACHINE COMPANY, *et al.*, 293 vs. TALK-O-PHONE COMPANY.	In Equity No. 8859.

State and County of New York, ss.:

Harry Ensign, being duly sworn, says: I reside at Toledo, Ohio, and am the Superintendent of the Talk-o-Phone Company, defendant above named, and have entire charge of the manufacture of talk-o-phones in the factory of the Talk-o-Phone Company at Toledo, Ohio, where all the talking ma-
294 chines of that Company are and have been made. The Talk-o-Phone Company is an Ohio corporation having authorized capital stock in its certificate of incorporation of Five hundred thousand dollars ($500,000), of which Four hundred thousand dollars ($400,000) have been issued, and the Talk-o-Phone Company has already increased the amount of its capital stock authorized to $1,000,000 and the amount of the issue thereof. Several hundred thousand dollars have been invested by the Talk-o-Phone Company in its factory and plant at Toledo, Ohio, and the attacks made by the

complainant herein, together with their misleading circulars and statements to the trade, and their delay in bringing this suit to a hearing have seriously injured the business of the Talk-o-Phone Company. For the past three years I have been engaged in the manufacture of talking machines, principally for the Talk-o-Phone Company, and I am familiar with the principle of construction and the mode of operation of all parts of talking machines and particularly disc talking machines, such as the Talk-o-Phones. I am also familiar with the construction, principle and mode of operation of the disc talking machines made and sold by complainant, the Victor Talking Machine Company, and by the American Graphophone Company. I also undertsand and am familiar with the talking machines described in letters patent of the United States to Berliner, Nos. 534543, 564586, 372786 and 382790, and in Berliner's corresponding English patents, No. 15232 of 1887 and No. 7204 of 1888; and with Berliner's corresponding French Patents No. 186827 of November 8, 1887, No. 190602 of May 15, 1888 and No. 207090 of July 19, 1890; also with Berliner's corresponding German patents Nos. 45048, of November 8, 1887, 47099, of May 16, 1888 and 53622, of November 20, 1889. I am also familiar with the Berliner-Suess Canadian Patent No. 41901 of February 11, 1893. and with other patents to various inventors for talking machines. I have given special attention in the course of my business to the manufacture of sound boxes consisting of a diaphragm with a recording or reproducing stylus connected therewith for use in disc talking machines. 295 296 297

Referring to the patent in suit to Berliner, No. 534543, Berliner states (p. 1, ls. 17-31) that "one feature of my invention has reference to improvements in the method of recording sound by tracing upon a fatty film, etc.; while the other features of my

298 invention have reference to the construction of the details of both the recorder and the reproducer of the gramophone. Each of these features of improvement are designed to overcome certain difficulties, and to avoid certain imperfections heretofore met with in the operation of the gramophone." By the "recorder" and "reproducer" are meant the recording and the reproducing sound boxes shown in Figures 4, 5, 6 and 7 of the drawings of that patent. Berliner describes his recorder on page 3, lines 3-109, and his reproducer on page 5, lines 34-102.

The recorder described in the patent consists of
299 a diaphragm mounted in a casing connected with the lever carrying a recording stylus and extending over the face of the diaphragm. The lever and stylus consists of two parts joined together so that the parts are at right angles, the face of the one to the face of the other. In normal position the stylus is curved, but is unbent and becomes straight when adjusted in position preparatory for the making of a record. Bands of rubber or the like surround the stylus to dampen the individual vibrations thereof. One end of the lever and stylus is fixed or fastened to the casing, while the other end or point of the stylus is free to vibrate. The recorder
300 is shown in Figures 4 and 5, and it appears from those figures that the lever and stylus may be adjusted along the line of a diameter of the circle of the diaphragm. Means are provided for regulating the tension between the lever and the diaphragm. With the exception of unimportant details including the eccentricity referred to, the same recorder or recording sound-box is shown and described and claimed in French patent to Berliner No. 207090 of November 11, 1890. This appears not only from the description of the two patents, but also from a comparison of Figures 4 and

5 of U. S. Patent No. 534543 with Figures 1 and 2 301
of the French patent. The essential features of construction of the one constitute the essential features of the other. The principles and modes of operation of the two are alike, and the two embody and operate according to the one and the same invention. The eccentricity of the lever shown in Figure 4 of the United States patent is not a qualification or limitation of the foregoing statements, for the reason that such eccentricity is a mere modification or improvement upon the main features which are claimed without the eccentricity in the United States patent in Claims 6, 7, 8, 9, 10 and 16, for example. Berliner's reproducer shown 302
in Figures 6 and 7 of the United States patent consists of a diaphragm mounted in a casing connected with the leaf spring or lever carrying at one end a reproducing stylus, which end is free to vibrate, while the other end is fixed to the casing. The leaf spring or lever consists of two parts bent at right angles, the one to the other at about the middle, and means are provided for adjusting the tension between the diaphragm and the lever. In the tube attached to the reproducer one or more perforated diaphragms (114) are placed for the purpose of lessening or rendering more clear the sound given out. A comparison of the description of the reproducer and of Figures 6 and 7 of 303
the United States patent with the description and Figures 3 and 4 of the French patent, and with the description and drawings of German Patent to Berliner No. 53622, of November 20, 1889, show that the reproducer of the American patent and of the French and German patent are identical as to the details of construction, the functions, principle and mode of operation, and that one and the same invention is embodied in each and claimed in each of the three patents.

Referring to Canadian Patent No. 41901, of Feb-

304 ruary 11, 1893, to Berliner, assignee of Suess, this Canadian patent is identical in its drawings and description with the United States Patent No. 427279, of May 6, 1890, to Berliner, assignee of Suess, except that there is a slight difference of arrangement of the paragraphs of the description, and except that there is a radical difference between the claims of the two patents, the claims of the Canadian patent being of the broadest possible character, referring especially to Claims 11, 12 and 13, for example, and particularly to Claim 11. In the Berliner-Suess Canadian and United States patents it is said:

305 "The stylus engaging with its point the record groove, is controlled by the walls of the latter, and as will be hereinafter more fully shown, I rely upon this control of the stylus by the walls of the record groove for the movement of the stylus across the face of the disc, there being no positive feeding mechanism for thus moving the stylus."

This movement is broadly claimed in Claim 11, for instance, of the Canadian patent, which reads as follows:

"11. In an apparatus for reproducing sounds from a rotating record tablet, a re-
306 producing stylus mounted to have a free movement over the surface of the record tablet, substantially as described."

The Suess apparatus is substantially identical with talking machines of that class upon the market not provided with feed mechanism or feed screws to move the stylus across the face of the disc, but depending upon the walls of the rotating record for that purpose. Referring to Figure 3 of the patent in suit, No. 534543, the apparatus there shown by Berliner and described at p. 4, line 95,

to p. 5, line 33, is purely and simply the apparatus 307
shown and described and claimed in the Berliner-Suess Canadian and United States patents, except that the reproducer carried by the end of the arm, 88, and connected with the horn, 94, 95, is the reproducer shown in Figures 6 and 7 of the Berliner Patent in suit No. 534543. That is to say, the only difference between Figure 3 of the patent in suit and the Suess machine of the Berliner-Suess Canadian and United States patents, is that Berliner has introduced improvements in the details of construction of the reproducer, and this, I understand, is what Berliner meant when he said in the part already quoted, that the features of his invention 308
had reference to the "construction of the details of both the recorder and reproducer of the gramophone." With this exception, therefore, the exception of the details referred to of the reproducer shown in Figures 6 and 7 of Patent No. 534543, the reproducing apparatus of Berliner as a whole, its principle and mode of operation shown in Patent No. 534543, is identical with, and is in fact nothing but the Suess apparatus of the Berliner-Suess Canadian and United States patents.

Passing now to Berliner Patent No. 564586, of July 28, 1896, it appears from the statement thereof, that the invention was patented in England by English Patent No. 15232, of November 8, 1887. A 309
comparison of the Berliner French and German Patents No. 186827, of November 8, 1887, and No. 45048, of November 8, 1887, with English Patent No. 15232, of 1887, shows that the drawings of the three patents are identical, that the French patent, including the claims thereof is a literal translation of the English patent, and that the German patent describes exactly the same things in slightly different language. In the United States patent Berliner first describes the drawings, from page 2, line 7, to page 2, line 54. With the exception of Figure

310 10, these same drawings are shown in the said English, French and German patents, and at page 2, line 22, of the United States patent, Berliner says, "Figure 10 is a sectional elevation of a modified form of my reproducing apparatus." From page 3, line 55, to page 4, line 45, of the United States patent, Berliner describes the deposit of a film of ink upon the traveling tablet and the drawing of a phonautographic record thereon, and the copying of that record in solid resisting material. From page 4, line 46, to page 4, line 89, Berliner describes the reproducing of the original sounds by his apparatus shown in the figures other than Figure 10. He says (p. 4, lines 80-89): "The stylus is then ad-
311 justed with its point in engagement with the outer end of the record groove, and the weight, 26, is allowed to descend. It will now be clear that the stylus will be forced positively to follow the undulations of the record, and that the diaphragm vibrating under the stylus will emit the same sounds which produced the original record, which sounds can be distinctly heard at the ear-piece 34." This identical language is found in English Patent No. 15232, of 1887, at page 8, lines 44-50 thereof, and is, of course, found in the French patent, which is a translation thereof, and substantially the same thing is stated in the corresponding German patent
312 (see paragraph last but one preceding the patent claims). Broadly Berliner's invention so described in the United States Patent No. 564586 and in the said corresponding English, French and German patents is claimed in the patent in suit No. 534543 in Claims 5 and 35 thereof, which read as follows:

> "5. The method of reproducing sounds from a record of the same which consists in vibrating a stylus and propelling the same along the record by and in accordance with the said record, substantially as described."

"35. In a sound reproducing apparatus consisting of a traveling tablet having a sound record formed thereon and a reproducing stylus shaped for engagement with said record and free to be vibrated and propelled by the same, substantially as described." 313

This, I understand, is what the Circuit Court of Appeals meant, when, in its opinion in the suit of the Victor Talking Machine Company, *et al.*, vs. The American Graphophone Company it said:

"The specifications in that application (for 564586) were full enough to warrant the making of the claims here in controversy (5 and 35); at any time the application might have been amended by adding such claims, and in our opinion it is immaterial that instead of thus amending it he took the broader claims on another application filed while the first was pending. The second may fairly be considered a continuation of the first." 314

I am confirmed in my opinion as to this point by the statement with which Berliner continues the description of his invention. Continuing from page 4, line 89, he says:

"Both the process and the apparatus thus far described may be modified in various ways without departing from the main features of my invention * * * an arrangement of this character is shown in Figure 10." 315

It is thus perfectly clear that Claims 5 and 35 carried from the specification of Patent No. 564586 to the specification of the patent in suit No. 534543 cover and protect the invention, the identical invention claimed in United States Patent No. 564586, and in the corresponding English, French

316 and German patents mentioned. Claims 8, 9, 10 and 13 of Patent No. 564586 are identical or substantially identical with Claims 9, 12, 13 and 14 of the English and French patents, and the preceding method claims of the three patents are so clearly alike in the United States, English and French patents, that it is unnecessary to make any analysis of them, while the corresponding German patent claims the same things and methods according to the German practice. Claim 9, for instance, of English Patent No. 15232, of 1887, reads as follows:

> "9. In a gramophone, the combination of a
317 sound receiving diaphragm or other sonorous body; with a pivoted stylus controlled by a diaphragm, and controlling the same, and a support adapted to carry a phonautographic record sheet or a copy of such record, in solid resisting material, travelling in the plane of vibration of the point of the stylus, substantially as described."

It is perfectly clear that Claim 9 quoted from the English patent is inseparably connected with the invention described in Claims 5 and 35 of Patent No. 534543, and that the invention described and claimed in Claims 5 and 35 of the patent in
318 suit is inseparably connected with Claim 9 of the English patent. They are, indeed, for one and the same invention, made at the same time prior to Berliner's application filed November 7, 1887, in the United States for Patent No. 564586, forming part of one and the same inventive act, differing perhaps in scope, but being for essentially the same invention and including, as Berliner himself states, all the main features of his invention.

With reference to the reproducing apparatus shown in Figure 10 and described in lines 90-128 on page 4 of Berliner Patent No. 564586, I am clearly

of the opinion that such reproducing apparatus could not reproduce the sound recorded in a sound record. I am familiar and have for several years been familiar with talking machines put upon the market, and I have never seen a talking machine operating as the reproducing apparatus in Figure 10 is said to operate, nor have I ever heard of a machine so operating, and from my practical knowledge of talking machines acquired from the manufacture thereof on a large scale, I am able to state that the reproducing apparatus shown in Figure 10 is inoperative. For the following obvious reasons, well known to any person skilled in the art and apparent to any person who may familiarize himself with the subject matter, the apparatus shown in Figure 10 is incapable of reproducing sound recorded in a sound record. These reasons are: 319 320

First. The tube, 33, attached to the sound-box, 31, carrying at its end a flaring portion, is without any support whatever, except for its attachment to the sound-box, and no means are shown or suggested for the support of the tube. Therefore, the weight of the tube bearing upon the sound-box would throw the stylus, 29, out of adjustment with the groove of the sound record, and it would be impossible in the apparatus shown to keep the stylus in the groove of the record, because of the constant pressure exerted by the weight of the tube. If the tube were a horn, such as is generally used, the inability of the stylus to keep in adjustment with the groove of the record would be still greater. Another difficulty that would be caused by the weight of the tube bearing upon the sound-box would be the swaying of the carriage or truck, 55, upon the rail, 56. Without a horn, tube or other device attached to the sound-box or diaphragm casing, the audible reproduction of the sound would be practically impossible. 321

322 Second. The stylus, 29, is attached apparently to a pin projecting from the center of the diaphragm, but the stylus is without a fulcrum, as in Figures 3, 6 and 7 of Patent No. 534543. Therefore, although the stylus would be moved laterally by the lateral undulations of the record groove, the stylus thus moving would not cause the diaphragm to vibrate, and hence would not cause the sound to be reproduced.

Third. The movements of the stylus caused by the undulations of the record groove would be communicated to the truck, 55, suspended by wheels upon the rail, 56. Hence, as the stylus moves lat-
323 erally, the truck, 55, would move laterally, and the diaphragm would not vibrate and the sound would not be reproduced. If the stylus had a fulcrum or were otherwise connected with the diaphragm, so that it would, under proper conditions, cause the diaphragm to vibrate, and if the weight of the truck were made sufficiently large, there might be a vibration of the diaphragm, but in such case the weight of the truck would be so great as to interfere with its movement across the face of the record disc. No such arrangement, however, is shown or suggested, and even such an arrangement would be an impracticable one.

324 Fourth. Lost motion would occur where the pins pass through the wheels attached to the truck; in other words, the truck would vibrate and a proper reduction of sound would be impossible.

Fifth. The revolving disc would cause a swaying of the truck and the suspended sound-box with its attached stylus, by reason of which the stylus would constantly be forced out of adjustment with the groove of the sound record. As already stated, the weight of the tube, 33, would also have this effect.

Sixth. The pressure of the walls of the record groove upon the point of the stylus would tend to lift the inner wheel from the rail, and for this reason and for other reasons stated, the truck, 55, would constantly wabble. 325

Seventh. The height of the rail, 56, from the record, 54, is fixed or constant, and so is the length of the truck with the suspended diaphragm and stylus attached. No method is shown or described of causing the stylus to reach into the groove of the record. The depth of the record constantly varies, as is well known to all persons skilled in the art. If, therefore, the stylus does not reach down far enough, it will not enter the groove of the record, and if the stylus reaches down too far and comes in contact with the bottom of the record, the wheels of the truck, 55, would be lifted from the rail, 56, and the truck would fall. 326

Eighth. In the manufacture of disc talking machines, it has so far been impossible to construct a machine so that the record tablet or the plate supporting the record tablet will revolve in a plane perfectly horizontal. The revolving disc or tablet wabbles, or, in other words, the surface of the disc or tablet rises or falls, the rise or fall increasing toward the circumference. Because of this rise or fall of the revolving disc or tablet, either the stylus would leave the record groove or the bottom of the record groove would press upward against the point of the stylus and throw the truck off the rail, 56. In any case where the point of the stylus loses its adjustment with the record groove, the surface of the disc or tablet would subsequently strike against the point of the stylus and throw the truck off the rail. 327

Ninth. Record tablets are of varying thickness, and if the stylus would reach into the record groove of one record tablet with proper adjustment, it is

328 clear that it would not reach into another record groove upon a tablet or different thickness with proper adjustment. Therefore, either the truck would be thrown from the rail, or the point of the stylus would not reach the record groove.

Tenth. No method is shown or suggested of adjusting the stylus to the record groove or of keeping the stylus in the record groove, or of overcoming any of the difficulties pointed out, and although parts of a record might be reproduced, it would, in my opinion, clearly be impossible to reproduce a record of sound from start to finish.

329 Eleventh. In my opinion, the arrangement shown in Figure 10 is a mere laboratory experiment and not a practical or operative device, and the patent so far as this arrangement is concerned is a mere "paper patent."

My attention has been called to the article on Berliner's Gramophone published in the Electrical World for November 12, 1887. Mr. Berliner there suggests, as in No. 564586, at page 4, lines 123-126, that a "tolerably good reproduction may also be obtained by simply holding one end of a reed between the teeth and the other pointed end of the same in engagement with the record groove, while the disc is rotated." In the article in the Electrical
330 World, Mr. Berliner says:

> "This suggests the plan of mounting a reproducing diaphragm and stylus on a carriage moving on rails and permitting the point of the stylus not only to vibrate, but also to push the carriage across the revolving disc and thereby follow the volute of the sound record."

I have tried the method of reproducing sound by means of holding one end of a reed between the teeth, etc., as described, and the same is purely theo-

retical, no audible or reasonable or recognizable re- 331
production of sound being possible by such method, and in my opinion, the mounting of a reproducing diaphragm on a carriage moving on rails belongs to the category of reeds held at one end by the teeth. In his testimony in rebuttal in the suit of the Victor Talking Machine Company, *et al.*, vs. the American Graphophone Company, Mr. Berliner testified (Q4.), that his original apparatus embodying the construction shown in Figure 10 was lost. He further testified (Q6.) that the device covered by Claims 5 and 35 was first sold and put in public use in this country in 1894, by the United States Gramophone Company, seven years 332
after the application on November 7, 1887, for the Patent No. 564586, in which the arrangement shown in Figure 10 thereof is described. From an article published in the Electrical World for August 18, 1888, less than a year after Berliner filed his application on November 7, 1887, it appears that Suess' apparatus in this perfected form, the form in which it is used today, was then being used by Berliner, and I believe that the apparatus shown in Figure 10, above refered to, never was and never could have been more than a laboratory experiment.

Annexed hereto is a copy of the application filed 333
on behalf of the Talk-o-Phone Company for Letters Patent of the United States for improvements in talking machines. The first action of the Patent Office upon the application was had on March 8, 1906, with the result that the Patent Office had raised no objection of any kind to Claims 8, 9, 10 and 16, and only a formal objection to Claim 17, which claims cover the mechanical feed device of the machine now made and put upon the market by the Talk-o-Phone Company. Aside from its patentable features the machine described in the said annexed application and the talking

334 machine manufactured by the Talk-o-Phone Company in accordance therewith, one of which is herewith offered in evidence and marked Exhibit A, is made in accordance with English Letters Patent to Edison No. 1644, of 1878, and in accordance with numerous other patents for mechanical feed devices. Such mechanical feed devices operate on an entirely different principle from the Suess machine shown in Figure 3 of the Patent in suit No. 534543. Suess distinctly states in the Berliner-Suess Canadian and United States patents that he relies "upon this control of the stylus by the walls of the record groove for the movement of the stylus
335 across the face of the disc, there being no positive feeding mechanism for thus moving the stylus" (United States Patent 427279, page 1, lines 64-69); Canadian Patent No. 41901, page 3). In the Patent in suit No. 534543, at page 5, line 25, Berliner says, speaking of the same Suess device shown in Figure 3: "The rotating record groove will guide the stylus across the face of the tablet."

It appears from the annexed letters of Horace Pettit and the Victor Taking Machine Company that the complainant, the Victor Talking Machine Company, unwarrantably claims to the public that the Talk-o-Phone "mechanical feed" device is an infringement of Berliner Patent No. 534543, and
336 that the "mechanical feed" device can have no useful function to perform and is merely an attempt to evade said patent. These and all such statements I distinctly and emphatically deny. It is perfectly clear that the Talk-o-phone mechanical feed device and machine is manufactured according to well known principles of construction existing prior to November 7, 1887, and in accordance with the new patentable features described in the description and claims of the annexed application.

On March 13, 1906, at No. 90 West Broadway, in

the City of New York, I met Mr. Edward D. 337
Easton, President of the American Graphophone Company, and also Messrs. G. W. Lyle and R. F. Cromelin, officers of the same Company, and conversed with them with reference to talking machine matters. They urged upon me the advisability of the Talk-o-Phone Company taking a license under the Patent in suit No. 534543 from the Victor Talking Machine Company, complainant herein. They argued that it would be impossible for the Talk-o-Phone Company to prove the invalidity of that patent, notwithstanding the advice of our counsel, Mr. Hicks, to the contrary, and they stated that Mr. Pettit and Mr. Mauro were confident that 338
no one could now overthrow the patent. I spoke to them with reference to the Jones Record Patent recently held invalid by Judge HAZEL in suits brought by the American Graphophone Company, and they said that the Jones Patent had at least been the means of securing for them a license under the Berliner Patent in suit They seemed very anxious to have the Berliner Patent in suit now upheld, and as before stated, discouraged the idea that any one could or should further litigate that patent, and advocated strongly that the Talk-o-Phone Company take a license under the patent. I annex hereto copies of letters sent by the Victor 339
Talking Machine Company to the trade and by its counsel, Mr. Pettit, to customers of the Talk-o-Phone Company. In the letter of March 6, signed by Leon F. Douglass, Vice-President, this idea of taking a license under this expired and invalid patent is also advocated by the Victor Company.

The Talk-o-Phone Company is financially responsible. It has done and is doing a large business and owns and operates a large factory and plant at Toledo, Ohio, and has a branch office in the City of New York and in San Francisco, Cali-

340 fornia. Should the motion for preliminary injunction be denied the Talk-o-Phone Company would be amply able to respond in damages should the complainants eventually succeed at final hearing.

I have read the annexed affdavits of Edward F. Leeds (two) and of Albert L. Irish and the statements contained therein are true to the best of my knowledge, information and belief. I agree also with the reasoning and conclusions of said Leeds and Irish in matters relating to the use of records and machines. I herewith offer for the inspection of the Court a second sample Talk-o-Phone with
341 a mechanical feed device, marked Exhibit B, which the Talk-o-Phone Company is now manufacturing under my direction. An application for a patent on said Exhibit B has been filed in the United States on behalf of the Talk-o-Phone Company. As more fully set forth in the annexed affidavit of Mr. Irish the Talk-o-Phone Company has expended over Twenty Thousand dollars advertising its Talk-o-Phone with the mechanical feed device (Exhibits A & B) and the factory of the Talk-o Phone Company has been equipped at great expense to manufacture and sell the same on a large scale.

342 The Talk-o-Phones with the mechanical feed devices (Exhibits A and B) are recording as well as reproducing machines. They will record sound upon the usual tablets and will reproduce sound from the record of the same after recording. Thus it appears that the movement of the stylus across the face of the record in such Talk-o-Phones depends solely upon the mechanical feed device. Complainants' machines will not record but will only reproduce, thus showing that complainants' machines depend entirely upon the record groove

for the movement of the stylus across the face of the record. 343

HARRY ENSIGN.

Subscribed and sworn to before me this 5th day of April, 1906

[NOTARY'S SEAL.]

T. P. Dalton,
Notary Public,
Kings Co.

Certificate filed in New York Co.

CIRCUIT COURT OF THE UNITED STATES.

SOUTHERN DISTRICT OF NEW YORK. 344

VICTOR TALKING MACHINE COMPANY, *et al.*, vs. LEEDS & CATLIN COMPANY.	In Equity No. 8797.
VICTOR TALKING MACHINE COMPANY, *et al.*, vs. TALK-O-PHONE COMPANY.	In Equity No. 8859. 345

State and County of New York, ss.:

Edward F. Leeds, being duly sworn, says: I am President of Leeds & Catlin Company and I have been actively engaged in the talking machine business for over fifteen (15) years last past. I took an active part in the business of the North American Phonograph Company, which controlled

346 the phonograph and graphophone patents and manufactured sound records for that Company, and became familiar with the use and construction of recording and reproducing machines. About the year 1896 I became connected with Mr. Cleveland Walcutt in the talking machine business, and Mr. Walcutt and I for many years did business under the firm name of Walcutt & Leeds, manufacturing many thousand of sound records and various parts of talking machines for use in recording. Later I organized the Leeds & Catlin Company, which is now and has been since its organization actively engaged in the manufacture of
347 sound records, especially disc sound records.

The business of the Leeds & Catlin Company consists and has always consisted in the manufacture and sale of sound records, cylinder and disc sound records. The Leeds & Catlin Company has not been engaged in the manufacture of talking machines of any kind, except such recording machines as are used in the recording of sound records made in the manufacture by it. I have applied and obtained various Letters Patent for inventions made by me in the talking machine art, and I have studied and am familiar with the principal Letters Patent relating to this art. I have
348 made a very careful study of the theory and of the practice of recording and reproducing sound, and I am familiar with and I understand thoroughly the various machines and parts of machines used for such purposes.

I have read the annexed affidavits of Harry Ensign of the Talk-o-Phone Company, and of Louis Hicks. I have read the French, German, English and United States patents referred to in their said affidavits, and I agree with them:

First. That the reproducer shown in Figures 6 and 7 of the Patent in suit No. 534543, to Berliner,

and described in the specification thereof, embodies 349
the invention and only the invention embodied in German Letters Patent to Berliner No. 53622, of November 20, 1889. The reproducer shown, described and claimed in these two patents consists of a diaphragm mounted in a casing with a leaf spring extending over and across the diaphragm. The leaf spring is bent at about its center so that the surfaces of the two parts are at right angles the one to the other. One end of the leaf spring, the part parallel to the surface of the diaphragm, is fastened to the casing, while the other end carrying the reproducing stylus is free to vibrate. The reproducing stylus is attached to the free end of 350
the leaf spring in the same manner in each patent and the leaf spring is connected with the center of the diaphragm, and means are provided with which to regulate the tension between the diaphragm and the leaf spring. In each case the leaf spring is elastic in two directions at right angles to each other. Pieces of soft rubber in each case are used to dampen the individual vibrations of the leaf spring. The principle embodied in these reproducers of the said German and United States patent, the functions, the mode of operation and the construction of nearly every detail are substantially the same in one as in the other, and both 351
cover and embody the one invention.

Second. That the invention shown in figures 6 and 7 of the Patent in suit No. 534543 and described and claimed in the specification thereof is identical with the invention shown in Figures 3 and 4 of French Patent to Berliner No. 207090, of July 19, 1890, and described and claimed in the specification thereof. As the reproducer of the French Patent is identical in its construction, principle and mode of operation with the reproducer of the German Patent, it is unnecessary to

352 describe its details. It may be mentioned that the reproducer of the French Patent shows the perforated disc D (Figure 3) in the neck or tube attached to the diaphragm casing as in Figure 7 of the United States Patent (114), for the purpose of lessening the volume of the sound or rendering the sound more clear. In the German, French and United States patents the edge of the leaf spring comes in contact with the diaphragm casing at the point or place where the free end of the leaf spring passes over the rim of the diaphragm casing.

Third. That the invention shown in Figures 4 and 5 of the patent in suit and described and
353 claimed in the specification thereof is the same as in the invention shown in Figures 1 and 2 of said French Patent No. 207090 and described and claimed in the specification and claims thereof. The eccentricity of the lever shown in Figure 4 of the United States Patent is a mere difference in detail in no way affecting or qualifying the identity existing between the essential features of construction of the recorders of the two patents, and in the United States Patent the essential features of the recorder shown in Figures 4 and 5 are claimed without the eccentricity in Claims 6, 7, 8, 9, 10 and 16, for example, and in Claim 25. As appears
354 from Figure 4, the lever 61 may be adjusted so as not to be eccentric and so as to be along the line of a diameter. In the United States Patent (p. 3, lines 53-56), it is said of Figures 4 and 5, "to the end of the lever 61 is secured the recording stylus 62, by soldering or otherwise, with its plane at right angles to the plane of the lever as shown." In the French Patent it is said that the acoustic spring FH may be "composed either of two springs placed at right angles the one to the other as in Figures 1 and 2, or of a spring bent as in Figures 3 and 4." It is significant that in the United States and

French patents the acoustic springs of the recorders are composed of two springs placed at right angles the one to the other, while the acoustic springs of the reproducers are bent. It is clear that the two patents show, describe and claim one and the same invention. 355

Fourth. That the invention shown, described and claimed in United States Patent No. 564586 and in Claims 5 and 35 of No. 534543, the patent in suit, is also shown, described and claimed in English Patent No. 15232, of 1887; in German Patent No. 45048, of November 8, 1887, and in French Patent No. 186827 of November 8, 1887. This matter has been so fully considered in the affidavits of Messrs. Ensign and Hicks, with whose statements and conclusions I agree, that it is unnecessary to repeat the reasons for my opinion here. 356

Fifth. That the invention shown, described and claimed in Canadian Letters Patent No. 41901, of February 11, 1893, is identical with the invention shown in Figure 3 of the patent in suit, except in so far as Figure 3 of the patent in suit is modified by the use of the reproducer shown in Figures 6 and 7 of the patent in suit. The improved Berliner gramophone illustrated in the Electrical World of August 18, 1888, is obviously the gramophone of Werner Suess, and is substantially identical with the gramophone illustrated in the said Canadian Patent and in the corresponding United States Patent No. 427279, to Berliner as the Assignee of Suess. 357

I have carefully read Letters Patent to Berliner No. 564586, of July 28, 1896, applied for November 7, 1887, and have considered especially Figure 10 thereof and that part of the description (p. 4, lines 90-128) describing Figure 10. I have constructed an apparatus such as is shown in Figure 10, using,

however, a spring motor instead of a weight as the power with which to cause the tablet to rotate. With a stylus affixed to the diaphragm, as shown in Figure 10, it is impossible to obtain any practical or intelligible reproduction of sound. It is further impossible to attach a horn such as is shown in Figure 3 of the patent in suit to the diaphragm shown in the construction of Figure 10 of No. 564586, and to operate the apparatus so as to obtain a reproduction of the sound. It is, moreover, impossible to attach such a tube and flaring portion 33, shown in said Figure 10, to said diaphragm and to operate the apparatus so as to obtain a reproduction of sound. A stylus similar to the stylus 29 of Figure 10 and attached in like manner does not cause the truck 55 to move across the rail, but constantly bends, slips and leaves the record groove. As the record tablet never revolves in a plane perfectly horizontal, a truck suspended perpendicularly, as shown in Figure 10 does not keep the stylus in contact with the record groove. An apparatus such as shown in Figure 10, and such as I made and endeavored to operate immediately destroys the record by the slipping and scratching of the stylus. Difficulty was experienced in getting the truck 55 to maintain itself upon the rail 56, and in several instances the truck was thrown from the rail. As the tablet revolves the record groove striking the end of the stylus, such as 29, causes the truck to wabble. The depth of the grooves of disc sound records constantly varies and very likely this cause contributed to the indistinct reproduction obtained. Under favorable conditions, and using a reproducing stylus of today unlike that shown in Figure 10, and not using a horn, a reproduction of sound could be obtained, but from the apparatus shown in Figure 10, intelligible and continued reproduction of sound and the continued movement of the carriage along the

rail, and the keeping of the stylus point in the groove of the record was impossible. With the experience of today, many improvements could, of course, be suggested with reference to the construction shown in Figure 10, but I do not believe that even today a commercial and successful apparatus could be made according to that arrangement for the reason that I do not see how it would be possible to enable the diaphragm casing to carry the large horn used with all talking machines of today, and enable or permit the carriage to move across the rail 56. 361

The superintendent of my factory, Mr. Leo Moeller, assisted me in my experiments consisting in the construction and attempted operation of an apparatus such as is shown in Figure 10 of Patent No. 564586. Although I have been familiar with all talking machines put upon the market in the United States since the organization of the North American Phonograph Company in 1888, I never saw or heard of a talking machine operating according to the arrangement shown in Figure 10, except the one which, for the purpose of experiment, I constructed with my assistant, Mr. Moeller, in March, 1906. 362

EDWARD F. LEEDS.

Subscribed and sworn to before me this 5th day of April, 1906. 363

T. P. Dalton,
[NOTARY'S SEAL.] Notary Public,
Kings Co.

Certificate filed in New York Co.

364 CIRCUIT COURT OF THE UNITED STATES,

SOUTHERN DISTRICT OF NEW YORK.

VICTOR TALKING MACHINE COMPANY, *et al.*, vs. LEEDS & CATLIN COMPANY.	In Equity No. 8797.
VICTOR TALKING MACHINE COMPANY, *et al.*, vs. TALK-O-PHONE COMPANY.	In Equity No. 8859.

365

State and County of New York, ss.:

Leo Moeller, being duly sworn, says: I am superintendent of the factory of Leeds & Catlin Company and have been engaged in the talking machine business, especially in the manufacture of disc and other sound records, for the past four and one-half years. I have read the annexed affidavit of Mr. Edward F. Leeds and I conducted with him and
366 assisted him in the making of the experiment with an apparatus which we constructed in accordance with the arrangement shown in Figure 10 of United States Patent No. 564586 to Berliner, and in accordance with the description thereof found at page 4, lines 90-128. For the reasons stated by Mr. Leeds in his said affidavit the apparatus constructed and operated by us as aforesaid, in March, 1906, was not successful, and from my experience with talking machines I believe that an apparatus such as is shown in said Figure 10 belongs to the

class of laboratory experiments only. I have never 367
heard of such a machine ever put upon the market and I never saw one except the one which Mr. Leeds and I constructed and operated as aforesaid in March, 1906.

LEO MOELLER.

Subscribed and sworn to before me this 5th day of April, 1906.

T. P. Dalton,
Notary Public,
Kings Co.

[NOTARY'S SEAL.]

Certificate filed in New York County.

368

Defendant's Exhibit, Translation of Berliner French Patent No. 186827, of November 8, 1887.

Descriptive memorandum, annexed to patent of invention for fifteen years, taken November 8, 1887 by Mr. Emile Berliner, represented by M. Albert Cahen, Paris, Boulevard Saint Denis, No. 1, and which has been delivered to him by decree of the Minister of Commerce and of Industry under date of January 26, 1888, for "an apparatus for the recording and reproduction of sounds called gramophone."

369

PATENT NO. 186827.

This invention has reference to a novel method of, and apparatus for recording and reproducing all kinds of sounds, including spoken words, and is designed to overcome the defects inherent in that art, as now practised and in the apparatus used therefor.

(Note: The translation of the balance of this French Patent No. 186827 is identical with the complete specification of Letters Patent of Great Britain No. 15232, of 1887, to Emile Berliner, from line

370 9, page 1 thereof, beginning with the words, "By the ordinary method," and continuing down to the end thereof, including the claims, except that in said letters patent of Great Britain the claims are introduced by the following words: "Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is," while in said French letters patent the claims are introduced by the words "Summary; I claim as distinctive features of my invention"; and except that said letters patent of Great Britain close with the following words: "Dated this 8th day of November,
371 1887. Philip M. Justice, 55 and 56 Chancery Lane, London, Applicant's Agent," and said letters patent of France close with the words, "Paris, November 8, 1887, for Mr. Berliner. Signed; Albert Cahen." The 16 figures of the drawings of each of the two said patents are identical.)

The following certification appears upon said French letters patent:

(Seal; National Office of Industrial Property; National Conservatory of Arts and Trades.)

Paris, November, 6, 1905.
Certified as a correct copy.
Secretary General of
372 the National Office Of Industrial Property.
P. Noblesse.

[Note: See stipulation, *infra*, p 540, as to drawing of French Patent No. 186827.]

Defendant's Exhibit, Translation of Berliner French Patent No. 190602, of May 15, 1888.

Descriptive memorandum annexed to patent of

invention for fifteen years, taken May 15, 1888, by 373
Mr. Emile Berliner, represented by M. Albert Cahen, Paris, Boulevard Saint Denis, No. 1, and which has been delivered to him by decree of the Minister of Commerce and of Industry, under date of July 20, 1888, for "an improved process for the recording of sounds for their reproduction."

PATENT NO. 190602.

In a prior patent I have described a method of recording and reproducing spoken words and other sounds, etc.

(Note: The translation of the balance of this French Patent No. 190602 is identical with the com- 374
plete specification of Letters patent of Great Britain No. 7204, of 1888, to Emile Berliner, from line 7, page 1, thereof, beginning with the words, "and in connection therewith," and continuing down to the end thereof including the claims, except that in said letters patent of Great Britain the claims are introduced by the following words; —"having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is," while in said French letters patent the claims are introduced by the words, "Summary; Having thus completely described my invention, I
claim as the principal points characterizing it"; and 375
except that said letters patent of Great Britain close with the following words;—"Dated this 15th day of May, 1888. Philip M. Justice, 55 and 56 Chancery Lane, London, Applicant's Agent," and said letters patent of France close with the words, "Paris, May 15, 1888. For Mr. Berliner. Signed Albert Cahen.")

376 The following certification appears upon said French letters patent:

(Seal; National Office of Industrial Property; National Conservatory of Arts and Trades.)

Paris October 30, 1905. Certified as a correct copy.

Secretary General of the National Office Of Industrial Property.

P. Noblesse.

Defendant's Exhibit, Translation of Berliner French Patent No. 207090, of July 19, 1890.

377 Descriptive memorandum annexed to patent of invention for fifteen years taken July 19, 1890, by Mr. Berliner (Emile), represented by M. Armengand, Jr., Boulevard de Strasbourg, 23, Paris, and which has been delivered to him by decree of the Minister of Commerce, Industry and the Colonies under date of November 11, 1890, for "gramophone sound-boxes."

Patent No. 207090.

378 Figures 1 and 2 represent the recording sound-box.

Figures 3 and 4 represent the reproducing sound-box.

AA, casing as for telephones, microphones, etc.,

B, diaphragm.

C, acoustic tube.

D, diaphragm perforated to render the tone more clear.

E, small column.

FH, acoustic spring in combination, of elastic metal, caoutchouc, etc., composed either of 2 springs placed at right angles the one to the other,

as in Figures 1 and 2, or of a spring bent as in Figures 3 and 4. 379

GG rings of caoutchouc (they may also be of felt) to dampen the individual vibrations of the acoustic springs.

I, acoustic pin with or without threads, which transmits the vibrations of the diaphragm or of the acoustic spring from the one to the other.

KK, nuts serving to regulate, by making it ascend or descend, the acoustic spring, so that the diaphragm receives thus more or less pressure from above.

L, casing attached to FH and through which passes the acoustic pin which is there fixed by the screw, Q. 380

M, casing attached to the end of the spring FH, into which one inserts the needle O.

N, screw to hold the needle O.

P, screw to attach the acoustic spring FH to the casing, AA.

FUNCTION.

(See French Patent No. 186827, of November 8, 1887). Upon the surface upon which one is about to inscribe a sound-record (phonautographic inscription), one lowers the point of the spring FH until the latter forms the straight line xy. If, now, one speaks into the sound-box, the point of the spring will trace acoustic curves upon the surface. By engraving with a graving tool, with nitric acid, etc., (etching) one can then transform these curves into sound grooves. 381

In the reproducing sound-box 3, 4, the extremity of the acoustic spring H, carrying a ring of caoutchouc, G, presses against the casing of the sound-box. From the point of view of reproduction, this is more advantageous than if the spring were free, as in the recording sound-box 1, 2.

382 CLAIMS.

1. An apparatus for *recording* or *reproducing* sound-waves, composed of a diaphragm and of a vibrating spring or leaf placed transversely over the latter and of which one end is fixed while the free end is in contact with the surface recording the sound-waves.

2. An apparatus for *recording* or *reproducing* sound-waves, composed of a diaphragm, of an acoustic spring placed over the diaphragm and attached to it, a spring which is in part surrounded by gutta-percha, felt or by other like material, so
383 that this envelope dampens the individual vibrations of the acoustic spring.

3. An apparatus for *recording* sound-waves, composed of a diaphragm and of an acoustic spring connected with it, the free end of which is bent in its normal position but opens, so as to become straight, when it presses upon the tablet for the recording of the sound-waves.

4. An apparatus for *recording* sound-waves, composed of a diaphragm, of an acoustic spring placed over it and of a pin which connects the spring to the diaphragm in such manner that the tension between it and the accoustic spring
384 can be regulated.

5. An apparatus for *reproducing* sound-waves, composed of a diaphragm, of an acoustic spring placed over it and of a casing at the free end of the acoustic spring, into which casing one point of a needle is fixed in such manner as to be able to be taken out of it and replaced without difficulty.

6. An apparatus for *reproduction* of sound-waves, composed of a diaphragm, of an acoustic spring placed over it and of a casing at the middle of the spring, which casing is traversed by a separate pin,

establishing the connection with the diaphragm or spring. 385

7. An apparatus to *reproduce* sound-waves, composed of a diaphragm, of a casing for the diaphragm and of an acoustic spring placed over the diaphragm and connected to it, while its free end presses upon or against the casing.

Paris, July 19, 1890,
Representing Mr. Berliner,
Signed; Armengand, Jr.

(Seal; National Office of Industrial Property; National Conservatory of Arts and Trades.)

Paris, October 19, 1905, 386
Certified for correct copy,
Secretary General of the National Office of Industrial Property.
P. Noblesse.

(Seal; Ministry of Commerce, Industry, Postes and Telegraphs.)

Examined for the legalization of the signature
Of M. Noblesse, Secretary General of the National Office of Industrial Property. 387
Paris, October 19, 1905.
For the Minister of Commerce and Industry, and by authorization.
For the chief of the division of officers and of accounts.
The sub-chief of the bureau of officers.
L. Marcardit.

388 (Seal; Ministry of Foreign Affairs; French Republic.)

The Minister of Foreign Affairs certifies as genuine the signature of M. Marcardit.
Paris, October 19, 1905,
For the Minister,
For the Chief of the Bureau.
Charles Bavelier.

(Seal; Consulate General of the United States of America, Paris.)

389

U. S. Consul General, Paris, France, October 19, 1905,
The Seal of the Minister of Foreign Affairs and
The signature of M. Charles Bavelier are certified to be genuine.
Hanson C. Coxe,
Deputy Consulate-General of the United States of America,
Paris, France.

390

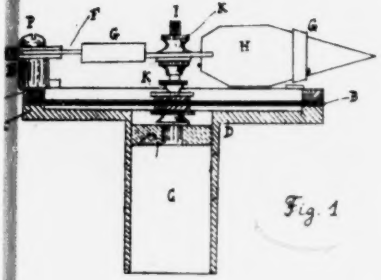


Fig. 1

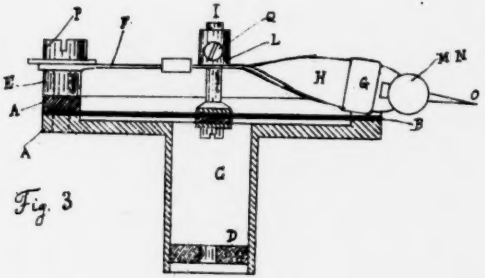


Fig. 3

Fig. 2

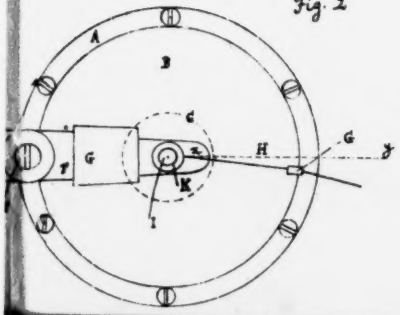
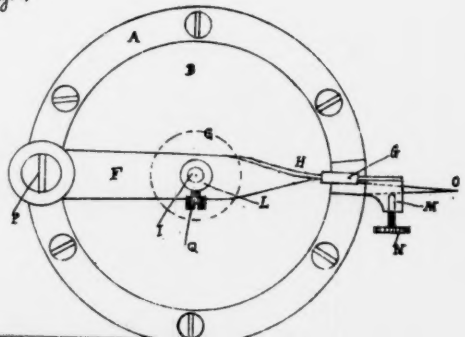


Fig. 4



394 **Defendant's Exhibit, Translation of Berliner German Patent No. 45048 of November 8, 1887.**

CERTIFICATE.

That the annexed copy of the specification agrees with that which to the holder of Patent 45048 with the patent deed has been issued, is certified with the remark, that the patent has been cancelled in the rolls.

Berlin, November 6, 1905.

[Seal; Imperial Patent Office] The President of the Imperial Patent Office.

Haup.

395

Imperial Patent Office. Letters Patent No. 45048.

Class 21: Electrical apparatus. Published November 2, 1888.

Emile Berliner of Washington (Columbia, U. S. A.)

Process and apparatus for the recording and reproducing of sounds. Patented in the German Empire from November 8, 1887.

The present invention has reference to a novel method of, and apparatus for the recording and

396 reproducing of sounds and spoken words.

By the apparatus for recording sounds and spoken words heretofore brought into use by way of experiment a stylus attached to a vibratory diaphragm is intended under the influence of the diaphragm to indent a travelling sheet of tin-foil or other suitable material or by cutting along into the same to make a groove. The operation of such an apparatus is not satisfactory, because the force of a diaphragm vibrating under the impact of the sound-waves is too weak to overcome the resistance of the tin-foil to a sufficient extent. Add to this,

that the said resistance increases with the depth of 397
the indenting or cutting and with the speed of the sheet of tin-foil, by reason of which the records obtained by the method hitherto employed cannot be correct. For this reason, loud sounds, for example, are less accurately recorded than weak ones, and the voice of a loud speaker recorded by the phonograph cannot be recognized. Moreover, if one gives to the stylus such a direction that the same touches the record surface only lightly, one obtains incorrect records; when in this case the diaphragm at times imparts a slight outward motion to the stylus, so that it does not touch the surface at all, the recording is entirely interrupted, es- 398
pecially if loud sounds are being recorded.

The present invention aims at a recording of sound-waves by a friction-resistance between the stylus and the recording surface which is constant throughout. The records obtained in this manner are then, by a special process, copied in a suitable, resisting material in order to be able to reproduce the sounds themselves.

The accompanying drawings illustrate two of the numerous forms in which an apparatus can be made according to the present invention.

Fig. 1 is a perspective view of one such apparatus.

Fig. 2 a perspective view of the recording dia- 399
phragm with the recording point or stylus.

Fig. 3 a perspective view of a part or the recording drum.

Fig. 4 a perspective view of the same part with the record surface applied.

Figs. 5, 6, and 7 show different views of a record surface.

Fig. 8 is a perspective view of another modified apparatus, in which the sounds are recorded upon a plain surface, while in the apparatus, shown in Figs. 1 to 7, the recording surface is cylindrical.

400 To illustrate further:

Figs. 9 and 10 a view of the appurtenant diaphragm with the stylus and a section through the middle of the first.

Fig. 11 a cross-section on the line x-x of Fig. 9.

Fig. 12 a vertical section through the middle of the recording disc.

Figs. 13 to 15 different details of construction of the mechanism and a centering device, and

Fig. 16 is a record-diaphragm.

According to the arrangements shown in Figs. 1 to 7, two standards H and J are mounted upon a base plate A, upon which is placed the shaft of the
401 drum G which is provided with side-flanges. At one place B the cylindrical surface of the drum G is broken by a gap to the edges of which a box K, extending into the interior of the drum, is fastened. Upon the cylinder surface a thin film *f'*, Figs. 3 and 4, of felt or other elastic material is placed, which is bent over the edges of the gap B and secured to the inner walls of the box K. This film serves as an elastic support for the recording surface. For the latter a strip made of paper, metal or other suitable substance is employed, the ends of which, in the manner shown in Fig. 7, are secured to two bars *c* and *d*, which after placing the strip upon the
402 elastic film *f'* of the drum, come to lie close together in the box K, Fig. 4, out of which they then project somewhat on the sides, in order by means of bolts *q* to fasten them together and thereby at the same time the strip to the drum. After the strip is fastened in the said manner, its surface is covered with a thin layer of a substance easy to remove by the action of the stylus. For this purpose lamp-black or smoke-black is used, which is deposited by placing a smoky flame under the strip and slowly turning the drum, until all parts of the strip are equally covered by the lamp-black. Such

a layer of lamp-black adheres well to the surface 403
of a solid body, but can, as is known, be very easily removed leaving a plainly visible line. This process is known and has already been used in the production of phonautographic records.

The diaphragm *m*, Fig. 2, is mounted in a frame *n*, with its plane at right angles to the axis of the drum G.

A post *o* is fixed to the centre of the diaphragm for a stylus *s*, which in the post *o* and in the second post *p* (on the frame *n*) is pivoted, while its end extending over the latter, Fig. 1, lightly touches the record surface of the drum; the stylus constitutes accordingly a lever, which (of sufficient 404
length) carries over the vibrations of the diaphragm to the record surface in a direction nearly parallel to the axis of the drum G. Near it the drum is slowly and uniformly rotated by means of a crank L or other like means, so that the free end of the stylus removes the lamp-black from the record surface in an undulating line, which is a true graphic representation of the sound, under the waves of which the diaphragm vibrates. Because of the extremely small friction, which in this the free end of the stylus has to overcome upon the record surface, the record of the undulating lines by loud and low sounds is alike correct, since the vibrations of the diaphragm, are not, as is the case in 405
all other sound recording apparatus, here modified by the reaction of a sensible resistance. A phonautographic record obtained in this way can be fixed by the appl ion of a thin layer of varnish of any kind which dries quickly and does not oblit erate the record. If the deposit of lampblack is thick enough upon the record surface, the same can be handled without care.

After the application of the varnish the strip is removed from the drum and can then be preserved any length of time without disfiguring the record.

406 For the purpose of reproduction the record is copied in solid resisting material, preferably metal, which is accomplished either by a mechanical process of engraving, or electrical deposition or photo-engraving. The last process is to be preferred, since by it an exact copy of the record in copper, nickel, etc., can be obtained, without affecting the original record. The copied record is now fixed at both ends to the bars *c d*, as shown in Fig. 7, and is placed upon the elastic support of the drum in the same manner as the original record strip. In this it is necessary to take care that both ends of the groove *y* meet exactly, which is easily attained. In
407 Fig. 1 is illustrated the apparatus with the engraved record upon the drum. The free end of the stylus pierces the undulating groove and the drum then uniformly revolves. Thus the end of the stylus is forced to follow the undulations of the groove *y*, while the other end of the stylus sets the diaphragm in vibrations corresponding with the undulations, which again reproduce the same sounds as those which produced the original record. In the phonograph and gramophone made hitherto, the stylus bearing upon the indented or engraved record is forced against the diaphragm only by the elevated portions of the record, while the opposite movement into the depressions of the
408 record is accomplished solely and only through the elastic force of the diaphragm, since the latter is always under tension. In the present apparatus, the free end of the stylus moves in a groove of uniform depth and is moved positively in both directions, that is to say without dependence in one direction upon the elasticity of the diaphragm, and this sure movement of the one end of the stylus has as a consequence a forced movement of the diaphragm as sure.

This new process of recording and reproducing sound, does not, moreover, necessarily require the

use of a diaphragm, but there can also be used in 409
its stead any sonorous body (for example a tuning fork) in like combination with the stylus. Also the record surface need not be placed upon a drum, but it can be supported in any suitable manner upon a solid support of any description, which is moved uniformly past the stylus.

Also the lamp-black can be replaced by any other substance, which adheres well to the solid supporting body and is removed from the same with a small force.

In the form of the new apparatus shown in Figs. 8 to 16 the fundamental principles of the gramophone first described are retained and only cer- 410
tain changes of construction are undertaken which offer improvements in the process. The cylindrical surface of the gramophone first described has the disadvantage, that a copying of the record by the process of photo-engraving requires first a straightening of the former and then a laying of the straight engraved record plate upon the drum for the purpose of the reproduction of the sound.

This manipulation, attended with many details, is avoided in the following apparatus, in which the record of the sounds is produced upon the under surface of a flat plate which lies horizontally. At the same time, this arrangement offers also the advantage that the material removed by the stylus 411
falls away from the plate and leaves the undulatory groove very sharply defined, while in the apparatus described the material removed to the side by the stylus accumulates thickly in the adjacent grooves.

In Figs. 8 to 16, 1 is the platform of the apparatus, 2 a metal plate which is provided with a guiding rib 3 and is fastened upon the plate 1, and which supports the standards 4, 4′. Of the latter, one (4) is provided with a nut bearing 5, and the other (4′) with a smooth bearing (5′), Fig. 13, for

412 the shaft 6, which to the middle (or beyond) is provided with screw-threads, while on the remaining smooth portion extending to the right for a considerable distance it is provided with a groove 16. Between the standards 4 and 4′ is a movable support 7, which is movable upon the prismatical rib 3. This carries the shaft 6, the smooth part of which passing through a perforation of the movable support and through collars 8, 8 is securely connected with the movable support. The support 7 also carries the screw bearing 11, Fig. 12, of a bevel gear 9, which rests directly upon the screwed on head of the movable support and is provided with a flange 10, which serves as a support for the plate
413 13 (composed, with respect to the following transfer by the process of photo-engraving, of transparent material and preferably of glass free from blisters) and which is connected with the same by screws or the like. Finally, a bevel gear 14 fixed upon the shaft 6 engages bevel gear 9, by which the rotation of the shaft 6 is transmitted to the wheel 9 and (through this) to the glass disc 13, while the resulting longitudinal movement of the shaft 6 causes at the same time a similar movement of the movable support 7 and through this means a continual movement of the center of the glass disc 13.

414 Over the part (Fig. 13) of the shaft 6 provided with a longitudinal groove 16 is passed a sleeve 17 provided with a suitable spring or with a guide-pin 18, which sleeve on one side rests in the bearing 5′ of the standard 4′ and to which on the other side, by means of a wedge or the like, is fixed a compound gear 19. The latter is composed of a pinion 20, which meshes with a large bevel gear 22 mounted upon the shaft 23, and of a bevel gear 21 which meshes with the small bevel gear 24. Upon the shaft of the latter are secured the fans 25, which, rotating with great speed, serve as a regulator.

A weight 26, which is suspended by cords or the like 27, which are wound about shaft 23, is designed to set the latter in rotation and thereby the whole apparatus in action. 415

By this arrangement a fixed stylus pressing against the under surface of the rotating and at the same time advancing glass disc describes a spiral line, the pitch of which depends upon the degree of the advancing motion of the center of the disc and is determined by the pitch of the screw-thread of the shaft 6 and the rapidity of rotation of the disc itself.

In order to make the line, which the stylus describes upon the glass disc, visible and useful for further application, it is recommended in the present case to apply not lampblack but a layer of ink or color, which during the recording is sufficiently viscous neither to drop off nor to run. One obtains then, with extremely little friction of the stylus upon the glass disc, an extraordinarily sharply drawn line, which one can use in the following process of photo-engraving directly as a negative, when one exposes the metal to be engraved directly through the glass disc during the influence of the light at the described lines. 416

The recording stylus is in the present apparatus connected with the diaphragm 30, Fig. 9, in substantially the same manner as in that first described. The diaphragm itself (which, moreover, as in the first case, can also be replaced by any sonorous body) is fastened between two urceolate plates 31, Fig 10. A tube, 32, of rigid material, which is inserted into one of the two plates, serves as a connection with a flexible tube provided with a mouthpiece, 34 (Fig. 8), which can serve as well for a speaking tube as for an ear tube. The diaphragm itself caries at its centre a knob to which one end of the stylus is made fast by means of a soft rubber tube, 41, which is simply flattened and 417

418 forced into a slot of the knob. The stylus, 29, consisting preferably of a flat strip of phosphor bronze, pointed at its extreme end and suitably curved, is provided at about the middle of its length with a hole, Fig 11, through which a pin 42, formed at one end of a metal block, 43, and inserted into the central bore of a second metal block, 44, passes, which on each side of the stylus carries a soft rubber washer. The metal blocks, 43 and 44, finally rest on the points of the adjusting screws, 46, which accordingly constitute the pivot of the stylus. Moreover, the free part of the stylus rests upon a piece of rubber tubing 48, or the
419 like and consists itself of two pieces fastened to each other by a piece of rubber tubing 49, or the like. Because of this arrangement the free end of stylus is moved by the vibration of the diaphragm to the right and left of its position of rest, nearly parallel with the surface of the disc 13. The diaphragm is brought to the apparatus by a support 36, Fig. 10, which embraces the tubular support 32, and which is movable horizontally in a bearing 37, movable vertically in the standard 38. The process of recording and reproducing sounds by means of this apparatus appears from the foregoing description. The laying on of
420 the ink or color upon the glass disc is preferably done in the following manner; the under surface of the same is carefully polished and dried and then by means of a camel-hair brush is provided with a thin film of oil, while the disc rotates with moderate speed. Hereupon a smoky flame is held under the glass disc, in order to blacken it with lamp-black, which is absorbed entirely by the previously deposited oil and forms with the same a dense, uniform coating of very small thickness.

This coating which adheres very well to the glass disc, offers no perceptible resistance at all to the

point of the stylus. The disc is now ready to re- 421
ceive the phonautogram, and it is moved to the position shown in Fig. 8, with the point of the stylus near the outer edge. The point is then so adjusted that it exerts only a very slight pressure against the disc, which barely suffices to penetrate the coat of ink, whereupon the hitherto supported weight 26 is set free so that it sets the apparatus in motion. Hereupon the stylus describes as already stated, a spiral line upon the disc. If now, during the progress of the disc, sound waves are directed against the diaphragm, through the mouthpiece 34 and the tubes 33 and 32, the stylus will be vibrated to the right and left of the spiral line, and an undulatory 422
line, Fig 16, of even depth at all points will be described, which records with entire accuracy the sounds taken up by the diaphragm.

When the stylus comes near flange 10, the adjusting collar 8, upon shaft 6, is loosened and the latter is permitted still to rotate somewhat further, whereby disc 13 rotates without progress of its middle point and the stylus describes a circle 51, Fig. 16, which later facilitates the centering of the transferred record and is, therefore, called the centering circle.

The glass disc is then removed from the apparatus and the record inscribed in the coating of the 423
same is fixed by a thin coat of varnish, so that it may afterwards be handled without special care. Hereupon the copy of the record is produced in copper or other metal by means of the process of photo-engraving, wherein, as already stated, the original record is used as a negative. In the photo-engraved copy the sound-record appears, as an undulatory line of even depth, also the centering circle 51, by means of which, first of all, the center of the copy is determined by geometrical construction. After holes for the flange screws 12, Fig. 12, have been made on this at equal distances from the

424 determined center and diametrically opposite each other, and also a small hole in the middle itself, one can with certainty apply the metallic record to flange 10 of bevel gear 9. In order to increase the precision of this application, a suitable cylindrical block 52, Fig. 15, is placed in the upper part of the hole in which is found the head of screw 11, which serves as a pin for bevel gear 9. This block, which is called a centering block, has a fine axial hole 53, which corresponds exactly with the axis of wheel 9.

If now the photo-engraved copy of the record is placed upon flange 10, and the screw pins 12 passed
425 through the corresponding holes, a fine pin, say a sewing needle, is passed through the centering holes of the disc and of the centering block 52, and the nuts 50, are screwed upon the screws 12. Then the stylus is so adjusted, that the point of the same is in engagement with the outer end of the record groove and the weight 26 is allowed to descend. The stylus is then forced positively to follow the undulations of the record and to set the diaphragm in vibration, so that the same sounds, which produced the original record, are plainly heard again through the ear tube.

In place of making the copy of the original record in metal, one can also make it of sealing-wax,
426 for which one first makes a negative copy in metal and presses this upon a cake of softened sealing wax. The negative record can then be preserved for an indefinite time and be used at times as a stamp for the multiplication of the positive record in a cheap way.

Patent claims:

1. The inscribing of phonautographic records on a coating of semi-fluid ink or color spread upon a solid support, which is produced by first applying a coating of oil or fat to the support and then

spreading a thin layer of lamp-black upon the coating of oil. 427

2. An apparatus adopted for the use of the coating characterized under 1 for the reception of phonautographic records, characterized by:

a) A rotating drum G, which at one part of its circumference is broken by a recess B resembling a furrow and is provided with an elastic covering (of felt or the like), over which a strip of paper or the like is drawn and stretched by placing in the recess B two prismatic bars, *cd*, which are fastened to the ends of the strip, and by joining them to each other by the pin (*q*); 428

b) A two armed lever *s* fastened at the center of the diaphragm (or of the sonorous body) and attached pivotally to the casing (or at the edge) of the same, the free arm of which, pointed at the end, stands at right angles to the axis of the drum and approaches so far toward the same that its point strips off the covering of the paper strip in the direction of a line winding off as a straight or spiral line.

3. In the apparatus characterized under 2, the substitution for the paper strip carrying the record of a strip of flexible, but otherwise resisting material, in which the said record is copied by electrolysis or in other suitable manner, for the purpose of the reproduction of the recorded sounds and tones. 429

4. An apparatus adapted for the use of the coating characterized under 1 for the reception of phonautographic records, characterized by:

a) A horizontal disc (13), provided on its under surface with the said coating and made of resisting material, which, by means of a concentric driving wheel 9 connected with it, the vertical ro-

430 tating axis of which rests securely in a bearing (7) movable on a prismatic guide, stands in engagement with a shaft 16, which during its rotation moves in the direction of its length by automatic screwing and thereby takes with it the bearing (7) by means of adjusting collars or the like;

b) A stylus (29) consisting of elastic stiff parts joined with each other and in like manner as under 2b), yet elastically, joined with the diaphragm (or the sonorous body), the point of which removes the coating of the disc in the direction of the recorded line—and, after the loosening of the adjusting collars connecting the bearing (7) with the shaft 16,
431 in a circle.

5. For the purpose of making an exact mounting of a disc constructed for the reproduction of the tones and sounds as a substitute for the disc (13) of the apparatus characterized under 4, the process of providing the latter disc in two places with holes and producing in the covering of the same in the manner characterized under 4b), a circle, which by photo-engraving is visible in the reproducing disc in like manner as the holes.

Hereto is added 1 sheet of drawing.

432

[Note: The 16 figures of the drawing of the above German patent are identical with the 16 figures of the drawing of English Patent No. 15232 of 1887, to Emile Berliner.] (See stipulation, *infra*, p. 540, as to drawing of German Patent No. 45048.)

Defendant's Exhibit, Translation of Berliner German Patent No. 47099, of May 16, 1888. 433

CERTIFICATE.

That the annexed copy of the specification agrees with that which to the holder of Patent 47099 with the patent deed has been issued, is certified with the remark, that the patent has been cancelled in the rolls.

Berlin, November 6, 1905.

[Seal; Imperial Patent Office] The President of the Imperial Patent Office.

Haup.

434 Imperial Patent Office. Letters Patent No. 47099. Class 21: Electrical apparatus and machines. Published April 26, 1889.

Emile Berliner of Washington (Columbia, U. S. A.)

Process for the recording of sounds. Addition to Patent No. 45048, of November 8, 1887. Patented in the German Empire from May 16, 1888. Longest duration: November 7, 1902.

In order to be able to transfer the sound-recording-line, inscribed by the apparatus shown in the chief patent upon a non-resisting layer, directly 435 to the resisting support of this coating itself, one can make use of the etching process. In this process, when one heretofore made use of the process "for transferring inscriptions by etching to a resisting material" one employed a fluid etching ground layer of wax, which one made fluid for this purpose through heat. An etching ground made in this manner possesses, however, even if it is put on in a very thin layer, so great a toughness and clings by reason thereof so tenaciously to the surface to be etched, that it requires a not inconsid-

436 erable effort to get out of such an etching ground suitable lines for the etching.

Such an etching ground is, therefore, not useful for the present purpose, in which it acts for the production of a record without the use of force, and the use of the etching process for the production out of this ground of a record capable of being reproduced in resisting material was not heretofore possible.

The present invention relates now to the process for the making of an etching ground, which does not show this difficulty, but offers the possibility of the production of record inscriptions with the
437 same sharpness as the lamp-black mentioned in the chief patent.

The new process rests:

1. Upon the discovery, that wax, paraffine, etc., poured out in a dissolved condition and hardened through the evaporation of the solvent, shows a very small cohesion and as small adhesion to the surface covered with it.

2. Upon the discovery, that the slight contamination of the etching ground through the taking up of dust fibre from the air loses its troublesome effect, appearing in the making of the record inscrip-
438 tions, if one immediately before the recording of the sounds puts this etching ground in a moist condition by pouring upon it concentrated alcohol.

One obtains a good etching ground, if one dissolves beeswax at a moderately high temperature in benzine so far that one obtains thereby a saturated solution. This is then filtered and care is taken thereby to free the same as much as possible from the dust present in the air. This solution is spread uniformly upon the surface to be etched which is previously smoothly polished, cleaned and dried, and then the solvent (benzine) is permitted

to evaporate which it does within one or two min- 439
utes.

The result of this process is an exceedingly delicate film adhering to the surface to be etched, which offers to the recording stylus of the recording apparatus described in the chief patent no perceptible mechanical resistance; indeed, the delicacy of this film is so great that it is very perceptibly disturbed by stroking it with a camel's hair brush, so that it is then no longer useful for its intended purpose.

In order to lessen somewhat this exceedingly great sensitiveness of the film and at the same time to increase its resistance to the etching agents sub- 440
sequently employed, it is recommended to coat this film with still a second, produced in like manner, which, nevertheless, does not perceptibly increase the mechanical resistance of the etching ground to the recording stylus.

It has been mentioned, that it is necessary carefully to protect the material of the etching ground up to the time of its hardening from the dust of the air; but experience has taught that it is almost impossible to maintain this absolutely free from fine filamentary particles of dust. Although these almost unavoidable fine particles of dust are so fine that even with the most careful examination they escape the naked eye, still the same cause 441
trouble in the production of the record.

But if the etching ground is not perfectly free from dust fibres, the same will adhere to the recording stylus and be by it dragged through the newly formed grooves, whereby the latter obtain uneven edges which seriously impair the accuracy of the record.

Numerous experiments led to the discovery, that this difficulty is entirely overcome, if the etching ground during the recording is put in a moist con-

442 dition by a previous moistening with concentrated alcohol. The alcohol evaporates, it is true, very quickly, but still not quickly enough to disappear entirely before the record has been recorded, and this record shows now no unevenness of any kind; the lines are, moreover, as sharp and defined as if they had been made by a graver, and the point of the recording apparatus appears as clean as if the filamentary particles had entirely disappeared.

The principal of this phenomenon is not wholly cleared up; it may be that the fine particles of dust are hereby forced against the walls of the record grooves and by these held fast. Beside this
443 result the alcohol also still acts as a kind of lubricator for diminishing the friction of the recording stylus.

Since the etching ground made in the manner described is exceedingly thin and entirely colorless, so the record engraved in the same is almost invisible to the naked eye; but since it is desirable to examine the record before the etching, it is, therefor, recommended to color the etching ground before the recording of the record. This can be accomplished by exposing the etching ground to the cold smoke of a weak smoking flame, for example, of burning camphor, so that a very light deposit of lamp-black is made upon the etching
444 ground and the record inscriptions are afterwards visible as pale lines upon a gray ground.

Care must be taken in this blackening, that the etching ground is not held near to the flame, so that the same does not begin to melt, since otherwise the peculiar consistency of the same is entirely changed.

The prepared phonautographic support can be preserved indefinitely and is at all times in useful condition.

The recording of the sound record is accomplished in exactly the same manner, as when the

record supports are covered only with the half fluid ink, not useful as an etching ground, mentioned in the chief patent. 445

For the etching of the phonautographic record into the resisting support of the etching ground, one can, indeed, use the usual acids common for such purpose as nitric, hydrochloric, etc., for metals and fluoric acid or the fumes thereof for glass; here, however, it should be considered that in the etching hydrogen gas becoming free collects along the record lines and, especially on the edges of the same, forms a bar against further action of the acid.

In the ordinary process of etching, moreover, one can render this development of gas harmless by a brushing from time to time of the surface. But such a brushing of the delicate etching ground used in the present case would be impracticable, since no brush material exists that is sufficiently delicate not to injure the etching ground. For this reason it is advisable so to choose the etching agent that the hydrogen gas at the moment of becoming free is absorbed by the material to be etched. If the record support consists, for example, of zinc, and one uses chromic acid as an etching agent, no accumulation of gas bubbles takes place. 446

The records inscribed in such manner in resisting material can, without further preparation, be used directly for the reproduction of the recorded sounds. Also one can make of the same by electrolysis as great a number of copies as one pleases; in this case it is, however, necessary, first to polish the etched record, before one puts the record support into the electrical bath. Such a polishing one can obtain through a slight pressing of a pointed burnishing tool into the record-groove, while one for this support holds with one hand the burnishing tool in the groove and with the other sets the record support in rotation. In this manner the tool is guided by the record groove itself, while the 447

448 slight granular structure of the same is polished in a few moments without the characteristic of the groove suffering any damage whatever.

Instead of a special burnishing tool, the reproducing stylus of the recording apparatus can álso itself be used, the point of which usually consists of a hard metal, as iridium or the like. In this case, after one or two uses of the record for reproduction, the burnishing is effected.

Patent-claim:

In an apparatus for the recording and reproducing of sounds by the method characterized in
449 the chief patent No. 45,048, the substitution for the half-fluid ink, characterized in claim 1 of that patent, of an etching ground which consists of a saturated solution of wax, paraffine (or like substances slightly sensitive to acids) in a solvent readily evaporated, as benzine, and the moistening of the same immediately before its use, as a record surface, with strong alcohol, for the purpose of lessening as much as possible the resistance of the etching ground against the recording stylus, as well as of making possible the inscribing of a very sharp record and thereby the direct production of a record of resisting material by etching for the reproduction of the sounds.
450

Defendant's Exhibit, Translation of Berliner German Patent No. 53622, of November 20, 1889.

CERTIFICATE.

That the annexed copy of the specification agrees with that which to the holder of patent 53,622 with the patent deed has been issued, is certified with

the remark, that the patent has been cancelled in 451
the rolls.

Berlin, November 6, 1905,

(Seal; Imperial Patent Office.)

The President
of the Imperial Patent Office.
Haup.

Imperial Patent Office. Letters Patent No. 53,622. Class 42: Instruments.

Published September 17, 1890.

Emile Berliner of Washington (Columbia, U. S. A.)

Improvement upon the process and apparatus 452
protected by Patent 45048, for the recording and reproducing of sounds.

Second addition to Patent No. 45048 of November 8, 1887. Patented in the German Empire from November 20, 1899. Longest duration: November 7, 1902.

In the chief patent No. 45048, as in the first patent of addition No. 47099, there is described an apparatus for the recording of sounds, in which a stylus, set in vibration by a diaphragm in like direction as the diaphragm itself, traces upon a drum or plate revolving before the stylus and provided 453
with a coating according to the process protected in the said patent, light undulatory lines, which can then be transferred for the reproduction of the sound by the like stylus and the like diaphragm, so that neither for the recording nor for the reproducing of the sound is an operation of engraving or other destruction of the means serving for the recording necessary.

The present invention relates to an instrument in the part of the apparatus performing the reproduction and is that shown in the drawing in Figure

454 1 in a front view and in figure 2 in a vertical cross-section.

Upon the casing *cc'*, which holds between its parts the diaphragm *b* of mica, metal, etc., in such manner that the diaphragm can vibrate freely, is a spring *aa'* consisting of flat steel with its one end fastened, while the other end carrying the stylus can vibrate freely.

This flat spring can be bent somewhere about the middle at 90°, so that the part fastened to the casing extends with its flat part parallel to the diaphragm, while the free end of the spring stands with its principal face perpendicular to the dia-
455 phragm. The connection between the spring and the diaphragm is by means of a pin *m* which can be connected with the spring by means of an adjusting screw *f* passing through a metal block *e*, which on its part is made fast to the spring *aa'* and carries the perforation for the metal pin *m*. There is upon the diaphragm, for strengthening the place where the perforation is for the passage of the pin *m*, a small metal plate *o* made fast on one side, while on the other side a nut *n* is screwed upon the metal pin *m* which at this place is provided with screw threads. By an insertion of the adjusting screw *f* with the metal block *e* at one or another point of the metal pin *m*, the tension, which exists between
456 the spring and the diaphragm, can be regulated and at a suitable strength found by trial this tension is permanently fixed.

The reproducing stylus proper is not applied to the spring *aa'*, but consists of a special needle or spike *k*, which in a metal block *h* is held fast by an adjusting screw *i* or screwed in, which metal block is then in turn made fast to the spring *aa'*. This arrangement makes it possible easily to take out the spike, change it and replace it by another.

With the casing *cc'* carrying the diaphragm

there is connected the tube *d*, which leads to the horn for the further reception of the sound. In order to obtain a dampening of the function of the spring, a ring of rubber *r* is inserted by means of the screw *g* by which the spring is made fast to the frame cc′, while the freely vibrating end of the spring is surrounded by a ring of rubber *s*. 457

The method of operation of the apparatus remains the same as that shown in the chief patent and the first patent of addition.

Patent-claim.

The replacing of the two armed lever (s) protected by claim 2b of the chief patent No. 45048, and of the recording stylus (29) protected by claim 4b of the same, by a spring (aa′) carrying the stylus for the reproduction of the sound, which with the one end is made fast to the casing (cc′) enclosing the diaphragm, while the other end of the same can vibrate freely, so that the vibrations communicated to the latter are carried over by means of the pin (m) connecting the spring and the diaphragm at right angles to the surface of the diaphragm. 458

Annexed is 1 sheet of drawing.

459

Kopie der Patentschrift 53622.

Emile Berliner in Washington. (Columbia, V. St. A.)

Neuerung an dem durch das Patent 45048 geschützten Verfahren und Apparat für das Registriren und Wiederhervorbringen von Tönen.

Fig. 1.

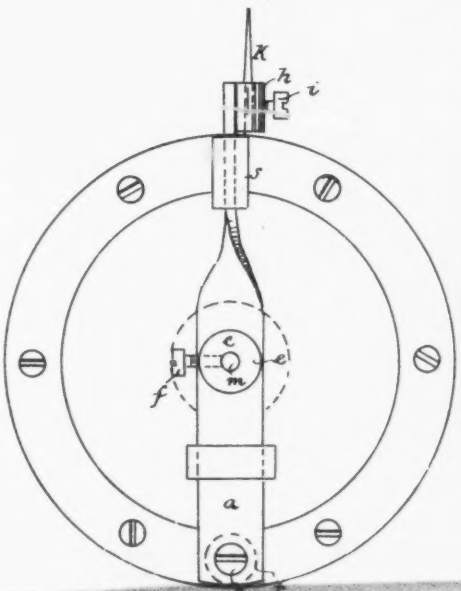
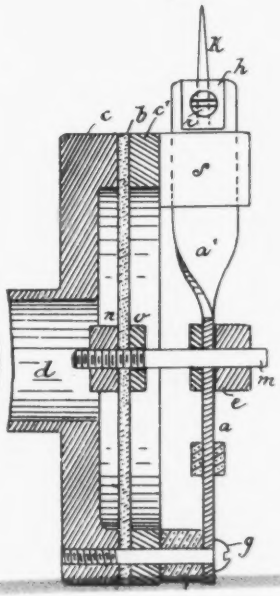


Fig. 2.



DOMINION OF CANADA.

PATENT (cut) OFFICE.

Certified that the annexed is a true copy of a Patent registered in the Patent Office under number 41901 granted to Emile Berliner and bearing date the Eleventh day of Feb., 1893, for "Improvements in Gramophones" with true copies of the specification and drawings remaining on record in this office, duplicate copies of which were attached to the Patent above mentioned.

(Seal.) Inventions Patent Office, Department of Agriculture Canada Bureau des Brevets D'Invention.)

AS WITNESS the seal of the Patent Office hereto affixed at the City of Ottawa in the Dominion of Canada this Nineteenth day of October. In the year of our Lord on thousand nine hundred and five.

GEO. F. O'HALLORAN.

DOMINION OF CANADA.

(cut) 41901.

To all to whom these presents shall come

Whereas Emile Berliner, Physicist, Assignee of Werner Suess, Mechanician, both of Washington, District of Columbia, United States of America, has petitioned the Commissioner of Patents, praying for the grant of a Patent for alleged new and useful Improvements in Gramophones, The said Werner Suess, having assigned to the said Emile Berliner, the right of obtaining the Patent and the exclusive property in and to the said invention, a description of which invention is contained in the specification, of which a duplicate is hereunto attached, and made an essential part hereof, and has elected his domicile at Ottawa, Ontario,

466 in Canada, and has also complied with the other requirements of the Patent Act Chap. 61, Revised statutes of Canada, and the Acts amending the same.

Now Therefore the present Patent grants to the said

Emile Berliner,

his executors, administrators, legal representatives and assigns, for the period of Eighteen Years from the date of these presents, the exclusive right, privilege and liberty of making, constructing and using, and vending to others to be used, in the Dominion of Canada, the said invention, subject
467 nevertheless to adjudication before any Court of competent jurisdiction.

Provided, that the grant hereby made is subject to the conditions contained in the Acts aforesaid.

The partial fee required for the term of six years having been paid to the Commissioner of Patents, this Patent shall cease at the end of six years from date, unless at, or before the expiration of the said term, the holder thereof pay the fee required for the further term or terms as provided by law.

In Testimony Whereof, I have hereunto set my hand and caused the Seal
468 of the Patent Office to be hereunto affixed, at the City of
[L. S.] Ottawa, in the Dominion of Canada, this Eleventh day of February in the year of our Lord one thousand eight hundred and ninety-three.

Countersigned Sigd. A. R. Angers.
Commissioner of Patents.

Sigd. R. Pope.
Deputy Commissioner of Patents.

Specification.

469

TO ALL WHOM IT MAY CONCERN:

BE IT KNOWN that I, WERNER SUESS, of the City of Washington, in the District of Columbia, U. S. A., mechanician, having invented certain new and useful improvements in Gramophones, I do hereby declare that the following is a full, clear and exact description of the same.

Reference being made to the accompanying drawing, in which Fig. 1 is a perspective view of one form of reproducer shown in the supporting frame, with a sound-conveying tube, with the diaphragm and stylus, in operative relation to the record disc.

470

Fig. 2 is a perspective view of the pivotal bearing of the frame, with parts removed and broken away.

Fig. 3 s a plain view of another form of supporting frame for the reproducer, by which the stylus is caused to travel in a straight line across the record tablet; and Fig. 4 is an end view of the same with the counterweight removed.

Like numerals of reference indicate like parts all throughout the drawings.

My invention has reference to improvements in the reproducing apparatus adapted for use in the method of recording and reproducing sounds here- 471
tofore invented and published by Emile Berliner. The whole apparatus used for the practice of the said method has been called the "Gramophone," and in this class of sound-recording and reproducing apparatus, the record is ordinarily produced on the face of a rotating disc as a volute band consisting of a sinuous or undulating groove of even depth. In the production of this record, a recording stylus is made to travel over the face of the rotating disc from the outer circumference toward the center in a straight radial path. The repro-

472 duction of the recorded sounds is effected by giving to a reproducing stylus vibratory movement by and in accordance with the sinuosities of the record groove, and these vibratory movements being transmitted to a diaphragm, vibrations of the latter give rise to sounds which are copies of the sounds originally uttered against the recording apparatus.

With the view of intensifying the sound emitted by the reproducer, and more especially of directing the same to the listener or listeners, I use a funnel-shaped tube, on the contracted end of which the reproducing stylus and diaphragm are mounted, while the open flaring end of the tube is directed toward the listener or listeners. This flaring
473 sound-conveyer thus becoming an intregal part of the reproducer, must have all the mass movements of the stylus and diaphragm; and being of considerable weight, it must be so supported and balanced that the recording stylus will bear with light but sufficient pressure upon the record tablet.

The best results are obtained if the reproducing stylus is made to travel in a straight radial line across the face of the record tablet, substantially in the manner in which the recording stylus has traveled in producing the record.

The main features of my present invention, therefore, have reference to the means for supporting
474 and counterbalancing the sound-conveying tube, with its attached diaphragm and reproducing stylus, and for making the path of the stylus across the face of the record disc as nearly as practicable a straight radial line.

The stylus engaging with its point the record groove, is controlled by the walls of the latter, and as will be hereinafter more fully shown, I rely upon this control of the stylus by the walls of the record groove for the movement of the stylus across the face of the disc, there being no positive feeding mechanism for thus moving the stylus.

Referring now to Fig. 1, there is shown a base plate 1, which may be secured by screws or otherwise, to any suitable support, such for instance, as a table. Erected on this base plate is a standard 2, on one edge of which are laterally projecting eyes 3, forming guides in which turns a vertical shaft or pivot 4. This shaft is stepped at the lower end in a bearing 5, in the base plate, and at the upper end, has secured to or formed on it, a head 6, which, as shown more clearly in Fig. 2, consists of a flat plate, to the center of which the shaft 4, is attached. 475

This head 6, serves as a support for a frame 7, consisting of an end piece 8, two parallel side pieces 9, secured at one end to the end piece by screws, as shown, or otherwise, and a rod 10, joining the other ends of the side pieces 9. Mounted in the side pieces 9, are pointed screws 11, projecting through nuts therein, and entering oppositely arranged seats (not shown) in the ends of the head 6, and forming a pivotal bearing for the frame 7, around which it may turn in a vertical plane at right angles to the axis of the shaft 4. 476

It will now be understood that the frame 7, may be moved in any direction, the shaft 4 and pivot screws 10, constituting a universal joint for the same. The rod 10, carries one end of an arm 12, secured rigidly thereon by a jam nut 13, which clamps the said arm firmly against a flange 14, on the rod, which latter is screw-threaded, as shown, for the reception of the nut 13. 477

The arm 12 is stiffened by longitudinal side ribs 15, and terminates at the free end in a head 16, on one side of which is secured a diaphragm holder 17, carrying a diaphragm 18; and on the other side of the head there is secured a flaring socket 19, communicating at its reduced end with a chamber (not shown) at the rear of the diaphragm.

478 Attached to the diaphragm is a stylus 20, mounted for lateral vibration and together with the said diaphragm, forming a sound reproducer. The construction of the stylus and the mounting therefor, form no part of the present invention, and are, therefore, not specifically described herein. The point of the stylus rests normally in the record produced on the face of a disk-tablet 21, which is mounted for rotation upon a disc carried by a vertical shaft 22, similar to the shaft 4, before described.

As shown in Fig. 1, the shaft 22, has at its upper end a thumb-nut 23, by means of which the tablet is
479 clamped thereon, and the said shaft is passed through eyes 24 (one only being shown) on a standard 25, and stepped in a bearing 26, in a base plate 27, on which the standard is erected.

The lower end of the standard is extended laterally on the plate 27, as shown at 28, and terminates in an upturned end 29, carrying at its upper end and below the level of the tablet, a bearing 30, for a horizontal shaft 31, which latter is provided with a crank 32, at the outer end, and a friction-wheel 33, at the inner end, which wheel engages the under side of the tablet supporting disc, which is not visible in the drawing.

It will now be understood that when the shaft
480 31, is rotated by means of the crank 32, the friction-wheel 33, engaging the tablet support will cause the latter to rotate and carry successive portions of the record under the stylus to reproduce the sounds, in a manner described in the aforesaid publications.

The mechanism for supporting and rotating the tablet may be of any suitable construction and entirely different from that shown, such construction being by no means an essential feature of my invention.

Secured to the end piece 8, of the frame 7, is a rod or arm 33′, extending in a direction opposite to that of the arm 12, and carries a weight or block 35; this weight may be adjusted upon rod 33′, and clamped in any desired position on a thumb-screw 36. 481

Attached to a short stem erected on the end piece 8, and over the shaft 4, is a semi-circular bracket 37, on which rests the funnel-shaped sound conveyer 38, the smaller end of which enters the socket 19. It will be readily understood that the sound conveyer supported in the manner described, together with the diaphragm and stylus, carried in the mounting attached to the arm 12, may be moved laterally around the axis of the pivot shaft 4, and vertically around the axis of the frame 7. By reason of these two movements, the stylus may be made to approach toward or recede from the axis of the rotating tablet, and in this manner traverse every portion of the surface of the said tablet; or it may be swung aside and entirely removed therefrom. 482

The operation of an apparatus so constructed, is as follows:

The tablet 21, containing a sound record in the form of a convolute sinuous or wavy groove, produced in the manner set forth in the aforesaid publications, is mounted on the supporting disc carried by the shaft or spindle 22. The weight 35 is adjusted to nearly counterbalance the arm 12, and parts carried thereby, so that the stylus rests lightly, but with sufficient pressure on the tablet with its point in the record groove. 483

The tablet is now rotated and the sinuous groove thereon vibrates the stylus, which in turn vibrates the diaphragm in accordance therewith, and thus produces sound waves, which latter are directed toward the listener by the sound conveyer 38. As the rotation of the tablet is continued, the convolu-

484 tions of the record groove will cause the stylus to be slowly drawn across the tablet, turning the entire support of the reproducing apparatus on its pivot bearing, the said stylus moving along a slightly curved path over the said tablet.

When placing a tablet in position, or on removing it therefrom. it is necessary to move the reproducer out of operative relation thereto; and for this purpose, the supporting frame is swung on the horizontal and vertical pivots to some position away from the tablet, when it may be lowered until a .....leg 38′, which depends from the arm 12, rests upon the
485 table on which the apparatus is secured.

It will be understood that the counter-weight may be adjusted to cause the stylus to bear with any desired degree of pressure on the tablet.

Referring now more particularly to Figs. 3 and 4, there is shown a standard or post 39, which is fixed to a table or other support, and terminates at the upper end in a yoke 40, having two upturned parallel ends 41, each carrying an inwardly projecting pointed screw 42, extending through a suitable nut formed therein. The pointed ends of these screws enter suitable seats on opposite sides of a plate 43, and constitute a horizontal pivotal bearing on which the said plate may be rocked. The
486 plate 43, has an arm 44, formed on it and extending centrally from one side, at right angles to its axis, and it also has another arm 33′, similar to that shown in Figs. 1 and 2, extending in a direction opposite to the arm 44, being on the other side of the axis of the plate.

The arm 33′ carries a sliding weight 35, similar in construction to that before described, and in a like manner serving as a counterweight.

Above the center of the plate 43, there is a semicircular bracket consisting of two curved branching arms 45, arising from a block 46. Through

this block there is a perforation for a pivot-bolt 47, which extends downwardly through the plate 43, and there receives a nut 48, by means of which the bolt is secured to the said plate, and the head of the bolt engages the upper face of the said block 46. This bolt 47, also passes through a washer 49, resting directly on the upper surface of the plate 43, and through eyes formed in the ends of links 50, the said ends being interposed between the lower end of the block 46, and the washer 49, thus it will be seen that the bolt forms a vertical pivot around which the bracket 45, 46, and the links 50, may move, and also secures them to the said plate. 487

The outer ends of the links 50, are pivoted to opposing corners of an articulated frame 51, composed of links 52, of equal length, connected together at the ends by pivot pins 53, 54, 55, and 56, respectively, the pins 54 and 55, also connecting the links 50, to the frame at the points before mentioned. 488

The pin 56, also pivotally connects one end of a link 57, to the corresponding corner of the frame 51, the other end of the said link being pivoted to the outer end of the arm 44.

The frame 51, together with the links 50, and 57, constitutes a well known mechanical movement, by which a curvilinear movement is converted into a rectilinear movement, provided the various links have the proper relative lengths; which is supposed to be the case in this instance, and, therefore, no detailed description of the operation thereof is deemed necessary. 489

In the apparatus shown in Figs. 3 and 4, the arm 12, is replaced by the link movement or system, and in this case the stylus and diaphragm will be mounted on the outer or free end of the said link system, namely at 53, and the sound conveyer 38, indicated by dotted lines in Fig. 4, will rest on friction rollers 57, mounted in bearings formed in cut

490 away or recessed portions 58, of the bracket arms 45.

In the operation of this apparatus, the counterweight 35, is adjusted in the manner before described, and the entire reproducer mechanism is moved to a position in which the stylus rests on the tablet, at the beginning of the record to be produced. Such position is indicated in Fig. 3, by the upper series of dotted lines, from which it will be seen that the frame 51, is of greater length than breadth.

As the record tablet is rotated, the volute record groove acting on the stylus, slowly draws it across the face of the tablet, as before explained, and turns
491 the entire reproducing apparatus on its vertical axis or pivot 47. As the apparatus approaches the position coinciding with the vertical plane of the arm 44, of the plate 43, the link 57, moving through an arc of shorter radius than that of the links 50, tends to force the frame 51, outward, which tendency is resisted by the said links 50, and the consequent action of these two opposing forces is to shorten the length and increase the breadth of the said frame 51, until it assumes the square form shown in full lines, Fig. 3. As the movement of the stylus is continued beyond the central plane of the arm 44, the frame 51, will be again lengthened,
492 as indicated by the lower series of dotted lines.

It will be understood that the length of the frame 51, decreases as the latter approaches a central position, and increases as it recedes therefrom, and in accordance with this change of shape of the said frame, its outer end (and the stylus thereon) will be carried to a constantly increasing distance from the pivot or axis of the apparatus, and the resultant of this constant longitudinal movement of the outer end of the frame, while the apparatus moves in an arc around its pivot, is to move the said end in a straight line.

When the reproducer stylus is moved over the record tablet in the manner stated, its path will coincide with the radius of such tablet, and the point of the said reproducer stylus will be at all times in the same relation to the record grooves as was the recorder stylus in producing such record. 493

In this operation, the sound conveyer must participate in the movement of the stylus toward and from the pivot 47, and it will, therefore, slide upon the arms 45, of the supporting bracket, and with a view of reducing the friction, the rollers 57, are provided.

CLAIMS.

Having now fully described my invention, I claim and desire to secure by letters patent: 494

1. In an apparatus for reproducing sounds from a rotating record tablet, a reproducing stylus mounted on a swinging lever system and having a rectilinear path over the record tablet substantially as described.

2. In an apparatus for reproducing sounds from a rotating record tablet having a record in the shape of a spiral groove, a reproducing stylus and diaphragm mounted on a swinging lever system and having a radial path over the record tablet, substantially as described. 495

3. In an apparatus for reproducing sounds the combination of a disc having a record of sounds in the shape of an undulatory, spiral groove upon its surface and rotating about its center, with a reproducing stylus guided by the record groove and mounted on a swinging lever system, so as to have a radial path over the record tablet, substantially as described.

4. In an apparatus for reproducing sounds from a record tablet, the combination with a reproducer

496 mechanism, consisting of a sound conveyer, and a diaphragm and stylus at one end of the said conveyer, of a system of links supporting the stylus end of the reproducer and proportioned and arranged as described for moving the stylus in a straight path across the record surface, substantially as described.

5. In an apparatus for reproducing sounds from a record tablet, the combination with a reproducer mechanism consisting of a sound conveying tube and a diaphragm and stylus mounted at one end of the tube, of a freely swinging supporting frame for the said reproducer mechanism, substantially as
497 described.

6. In an apparatus for reproducing sounds from a record tablet, the combination with a reproducer mechanism consisting of a sound conveying tube and a diaphragm and stylus mounted at one end of the tube, of a freely swinging supporting frame for the said reproducer mechanism, and a weight adjustable on the said frame to counterbalance the reproducer mechanism, substantially as described.

7. In an apparatus for reproducing sounds from a record tablet, the combination with a reproducer mechanism consisting of a sound conveyer, and
498 a diaphragm and stylus mounted at one end thereof, of a supporting frame for the said reproducer, loosely pivoted to swing freely both laterally and vertically, substantially as described.

8. In an apparatus for reproducing sounds from a record tablet, the combination with a reproducer mechanism, consisting of a sound conveyer, and a diaphragm and stylus mounted at one end thereof, of a supporting frame for the said reproducer, loosely pivoted to swing freely both laterally and vertically, and an adjustable counter-weight on the said frame, for determining the pressure of the

stylus on the record tablet, substantially as described. 499

9. In an apparatus for reproducing sounds from a record tablet, the combination with a reproducer mechanism, consisting of a sound conveyer, and a diaphragm and stylus at one end of the said conveyer, of a counter-weighted, pivoted frame for supporting the reproducer mechanism and provided with a system of laterally movable pivoted links connected at one end to the said reproducer mechanism, and at the other to a portion of the supporting frame fixed against lateral movement, substantially as described.

500

10. In an apparatus for reproducing sounds from a record tablet, the combination with a reproducer mechanism, consisting of a sound conveyer, and a diaphragm and stylus at one end of the said conveyer, of a system of links supporting the stylus end of the reproducer and constructed as described, for moving the stylus in a straight path across the record surface, and a pivoted bracket on which the sound conveyer rests, provided with anti-friction rollers on which the said conveyer travels longitudinally to participate in the movement of the stylus end of the reproducer, substantially as described.

501

11. In an apparatus for reproducing sounds from a rotating record-tablet, a reproducing stylus mounted to have a free movement over the surface of the record tablet, substantially as described.

12. In an apparatus for reproducing sounds from a rotating record tablet, a reproducing stylus mounted on a swinging lever system for carrying the stylus freely over the surface of the record tablet, substantially as described.

13. In an apparatus for reproducing sounds from

502 a rotating record tablet, a reproducing stylus mounted on a lever system permitting universal movement of the stylus, substantially as described.

In testimony whereof, I have hereunto signed my name in the presence of two subscribing witnesses, at Washington, District of Columbia, April 13th, 1891.

Werner Suess,
(signature of Inventor.)

Two Witnesses:
Joseph Lyons,
Frank T. Chapman.

This is the original specification referred to in the affidavit of Werner Suess hereunto annexed.

503 Sworn before me at Washington, District of Columbia, this thirteenth day of April, A. D. 1891.

Charles S. Drury,
Notary Public.

[SEAL.]

[Note: For stipulation as to drawing of Canadian Patent No. 41901 see *infra*, p. 541.]

DOMINION OF CANADA.

PATENT (cut) OFFICE.

CERTIFIED TO BE a true and correct copy of Assignment No. 20889 From W. Suess to E. Berliner. Recorded January 28th, 1893. Affecting Patent No. 41901.

504

(Seal; Inventions; Patent Office. Department of Agriculture. (cut) CANADA. Bureau des Brevets D'Invention.)

AS WITNESS the seal of the Patent Office hereto affixed at the City of Ottawa, in the Dominion of Canada this 27th day of October in the year of our Lord one thousand nine hundred and five.

Geo. F. O'Halloran,
Deputy Commissioner of Patents.

Patent Office 505
May 5
1891
CANADA.

Assignment Before Issue.

In consideration is the sum of One Hundred Dollars ($100) to me paid by Emile Berliner, of the city of Washington, District of Columbia, U. S. A., I do hereby sell and assign to the said Emile Berliner all my right, title and interest in and to my invention, for new and useful Improvements in Gramophones, as fully set forth and described in the specification which I have signed preparatory to obtaining a patent in Canada, and I do hereby 506
authorize and request the Commissioner of Patents to issue the said patent to the said Emile Berliner, in accordance with this assignment.

Witness my hand and seal, this Thirteenth day of April, 1891, at the city of Washington, District of Columbia.

(sgd) Werner Suess.

Witnesses:
Joseph Lyons.
Fannie Wise.

DOMINION OF CANADA.

PATENT (cut) OFFICE. 507

Certified to be true and correct copies of the Petition, Oath, Powers of Attorney, Receipt, Correspondence and Wrapper remaining of record in this office relating to application Serial No. 137454 filed on the 5th day of May, 1891, by Emile Berliner as assignee of Werner Suess, for "Gramophones," and which which matured to a Patent on the 11th day of February, 1893, and numbered 41901, and that the said patent expired on the 11th day of Febru-

508 ary, 1899, by reason of the non-payment of the fee for the second term of six years.

(Seal; Inventions. Patent Office. Department of Agriculture (cut) CANADA, Bureau des Brevets D'Invention.)

AS WITNESS the seal of the Patent Office hereto affixed at the City of Ottawa in the Dominion of Canada this 28th day of October in the year of our Lord one thousand nine hundred and five.

Geo. F. O'Halloran,
Deputy Commissioner of Patents.

509 O. K.

Patent Office,
May 5, 1891.

CANADA.

PETITION.

TO THE COMMISSIONER OF PATENTS:
OTTAWA,

The petition of Emile Berliner, of the City of Washington, District of Columbia, in the United States of America, physicist, showeth:

510

That Werner Suess, of the City of Washington, District of Columbia, in the United States of America, mechanician, has invented new and useful improvements in Gramophones, not known or used by others before his invention thereof, and not being in public use or on sale, with the consent or allowance of the said Werner Suess, as such inventor, for more than one year previous to this application for a patent therefor in Canada.

That your petitioner, by an assignment, bearing date the 13th day of April. 1891, acquired the right

of obtaining a patent from—Werner Suess afore- 511
said, for the said invention.

Your petitioner, therefore, prays that a patent may be granted to him as the assignee of the said Werner Suess, for the said invention, as set forth in the specification in duplicate relating thereto, and for the purpose of the Patent Act your petitioner elects his domicile in the City of Ottawa, Province of Ontario.

Emile Berliner.

Washington, D. C., April 13th, 1891.

OATH.

City of Washington, } 512
District of Columbia, }

I, Werner Suess, Mechanician, of Washington in the District of Columbia, make oath and say that I verily believe that I am the inventor of the new and useful improvements in "Gramophones" described and claimed in the annexed specification in duplicate relating thereto, and for which Emile Berliner solicit a patent by his petition dated April 13th, 1891.

And I further say that the several allegations contained in said petition are respectively true and correct.

(Signed) Werner Suess. 513

Sworn before me at Washington, in the District of Columbia, this Thirteenth day of April, 1891.

(Signed) Charles S. Drury,
Notary Public.

POWER OF ATTORNEY.

To the Commissioner of Patents, Ottawa:

The undersigned, Werner Suess, of the City of Washington, District of Columbia, United States of America, mechanician, hereby appoints Joseph

514 Lyons of Washington, District of Columbia, U. S. A., his attorney with full power of substitution and revocation, to prosecute an application for patent in Canada, for improvements in Gramophones, filed May 5, 1891, No. 56823; to sign the drawings, to receive the patent and to transact all business in the Patent Office connected therewith.

Signed at Washington, D. C., this 23rd day of January, 1893.

Werner Suess.

In the presence of:
E. Berliner.

R. C. M.
515 K. J. M.

POWER OF ATTORNEY.

To the Commissioner of Patents, Ottawa:

The undersigned, Emile Berliner, of the city of Washington, in the District of Columbia, United States of America, physicist, hereby appoints Joseph Lyons, of the city of Washington, District of Columbia, United States of America, his attorney, with full power of substitution and revocation, to prosecute an application for new and useful improvements in "Gramophones"; to sign the drawings, to receive the patent, and to transact all
516 business in the Patent Office connected therewith.

Signed at Washington, D. C., this Thirtieth day of April, 1891.

Emile Berliner.

In the presence of:
Werner Suess.

Patent Office, 517
May 5, 1891
CANADA.

PATENT OFFICE, CANADA.

Received from Messrs. Berliner & Suess,
$22. No. 21325
Patent and Ass't Fee. W. J. Lynch,
Cashier.

Cashier's Office,
May 5, 1891.

JOSEPH LYONS,
MECHANICAL AND ELECTRICAL EXPERT 518
SOLICITOR OF PATENTS,
EQUITABLE BUILDING, 1003 F Street, N. W.,
Cable Address, "Jolly".

Washington, D. C., May 2, 1891.

Hon Commissioner of Patents,
Ottawa, Canada.

Sir:—

With even mail, under separate cover, Please receive the application papers of Werner Suess, for Improvements in "Gramophones", and enclosed herein please find an assignement of the inyention from Werner Suess to Emile Berliner, together 519
with a postal money-order for Twenty-two dollars ($22) in payment of the application fee of Twenty dollars ($20) and the fee for recording the assignment, of Two dollars ($2).

Very respectfully,

Joseph Lyons,
Attorney for Emile Berliner.

520 Joseph Lyons,
Mechanical and Electrical Expert,
Solicitor of Patents,
Equitable Building, 1003 F Street, N. W.
Cable Address, "Jolly".

Washington, D. C., January 24, 1893.

Hon. Commissioner of Patents,
Ottawa, Canada.

Dear Sir:—

In the matter of the application of Werner Suess, No. 56,823, Filed May 5th, 1891, for Im-
521 provements in Gramophones, I herewith transmit the Power of Attorney of the inventor called for by communication from your Office, of January 5th, 1893.

Early action in this case is now respectfully solicited.

Your obedient servant,
Joseph Lyons,
Attorney for Suess & Berliner.

522

ENDORSED. 523

T. M. C. PATENT No. 41901. COST OF COPIES. PATENT & SPECIFICATION, $ SPECIFICATION, DRAWING, PETITION, OATH.

No. 56823.
DEPARTMENT OF AGRICULTURE,

PATENT BRANCH,

Washington, D. C.

May 2/5 1891

E. Berliner assignee of W. Suess per 524
J. Lyons, 1003 F St., N. W.

APPLICATION FOR PATENT FOR Gramophones.

$22.00 Model dispensed with (C. B. D.) 4/1/93.

Action Ackn. by Cir: 1 Receipt mailed. Model & Power of Atty. called for May 8/91.

Action Continued.

4/1/93 Patent may issue
M. Pope 525
Deputy Comr. of Patents
Power of Attorney again called for
Jany. 5/93. Power of Atty. rec'd
Jany. 24/26/93. Ackn'd Jany. 27/93.
Asst. 20889 Rec'd. Jany. 28/93.
Patent dated Feby. 11/93.
" mld. " 18/93 with Asst.

526 Translation of

THE LAW OF FRANCE.

(From Patent Laws of the World, Collected, Edited and Indexed. By Alfred Carpmael, Solicitor, etc., and Edward Carpmael, B. A. Patent Agent, etc.) Second edition, Revised. London. William Clowes and Sons, Limited, 27 Fleet St. 1889")

FRANCE. LAW OF THE 5TH OF JULY, 1844.

Chapter I.

GENERAL PROVISIONS.

527 Art. I. Every new discovery or invention, in all departments of industry, confers upon its author, under the conditions and for the time hereinafter mentioned, the exclusive right of working for his own profit the said discovery or invention.

This right is established by deeds delivered by the Government, under the name of Patents of Invention.

Art. 2. The following shall, etc.,

Art. 3. The following are not patentable, etc.,

Art. 4. The duration of patents shall be five, ten or fifteen years.

528

Every patent shall be subject to the payment of a tax fixed as follows:

Five hundred francs for a Patent of five years:
One thousand francs for a patent of ten years.
Fifteen hundred francs for a patent of fifteen years.

This tax shall be paid by annuities of one hundred francs under penalty of forfeiture if the patentee allows any year to elapse without paying the tax.

Chapter II. 529

FORMALITIES RESPECTING THE DELIVERY OF PATENTS.

Section I.

Applications for Patents.

Art. 5.

Any person who shall wish to obtain a Patent of Invention must deposit under a sealed cover, at the office of the Secretary of the Prefecture in the department in which he is domiciled, or in any other department, on electing domicile there,—

530

1. His petition to the Minister of Agriculture and Commerce;

2. A specification of the discovery, invention, or application forming the subject of the patent applied for;

3. The drawings or specimens necessary for the comprehension of the specification; and,

4. A memorandum of the documents deposited.

Art. 6.

The application must be limited to a single principal object, with the details that constitute it, and the applications which shall be indicated. 531

It must mention the duration which the applicants wish to assign to their Patent within the limits fixed by Article 4, and must contain neither restrictions, conditions, nor reservations.

It must set forth a title containing a short and precise designation of the object of the invention.

The specification must not be written in a foreign language. It must be without alterations, or interlineations. Words erased must be counted and verified; the pages and references being initialed. It

532 must not contain any denomination of weights or measures other than those inserted in the table annexed to the law of the 4th July, 1837.

The drawings must be made in ink and to a metrical scale.

A duplicate of the specification and drawings must be added to the petition.

All documents must be signed by the applicant or by his attorney, whose power remains annexed to the petition.

Art. 7.

No deposit can be received except on the production of a receipt proving the payment of the sum
533 of one hundred francs on account of the patent tax.

An entry made without charge by the General Secretary of the Prefecture on a special register, and signed by the applicant, shall prove every deposit, indicating the day and hour when the documents were delivered.

A copy of the said entry shall be delivered to the depositor on paying the cost of the stamp.

Art. 8.

The term of the Patent will run from the day of the deposit being made according to Article 5.

534 Section II.

Delivery of Patents.

Art. 9.

Immediately after the registration of the petitions, and within five days from the date of the deposit, the Prefects are to transmit the documents under the seal of the inventor, to the Minister of Agriculture and Commerce, adding thereto a certified copy of the entry of the deposit, the receipt proving the payment of the tax, and, if there be one the power of attorney mentioned in Article 6.

Art. 10. 535

On the arrival of the documents at the Ministry of Agriculture and Commerce they shall be opened, the petitions registered, and the patents delivered in the order in which the said petitions have been received.

Translation of

THE LAW OF GERMANY.

(From Patent Laws of the World, Collected, Edited and Indexed. By Alfred Carpmael, Solicitor, etc., and Edward Carpmael, B. A. Patent Agent, etc.) Second edition, Revised. London. William Clowes and Sons, Limited, 27 Fleet St. 1889.") 536

Germany. LAW OF THE 1ST JULY, 1877.

FIRST SECTION.

Patent Rights.

§1.

Patents are granted for new inventions which can be turned to account in trade.

The following are excepted:—

1. Inventions the use of which would be incompatible with the laws or public morals: 537

2. Inventions of articles of food (for nourishment or luxuries), of medicines and of substances produced by chemical process, so far as the invention does not relate to a definite method of producing such articles.

§7.

The duration of a patent is 15 years; the term commences with the day following the day of appli-

538 cation. If an invention is an improvement upon another invention patented in favour of the applicant, the latter may apply for a patent of addition, which terminates with the patent for the original invention.

THIRD SECTION.

Proceedings in Patent-matters.

§20.

The application for the grant of a patent for an invention must be made in writing to the Patent Office. For each invention a separate application is required. The application must contain the peti-
539 tion for the grant of a patent, and must point out with precision the object sought to be patented. In a separate document the invention must be described in such a manner that its practicability plainly appears to skilled persons. The necessary drawings, figures, representations, models and samples must be supplied at the same time.

The Patent Office will issue regulations respecting the other requisites of the application.

Up to the time of publication of the application, alterations in the description are permitted. With the application a fee of 20 marks (£1) must be paid for the cost of the proceeding.

540 §22.

If the Patent Office finds the application in due form, and that there is no objection to the granting of a patent, it will order the application to be published. From the date of publication, the subject of the application will provisionally have the protection of a patent in favour of the petitioner (§§1 and 5).

If the Patent Office is of opinion that, according to §§1 and 2, the invention is not patentable, the application will be rejected.

§24.

After expiration of eight weeks from the day of publication (§23) the Patent Office will decide as to the granting of the patent. Until that date objections against the granting can be lodged with the Patent Office. They must be made in writing, giving the grounds, which can only be the assertion that the invention is not new, or that it comes under §3, part 2.

Before deciding, the Patent Office may summon and hear the interested parties; it may also cause the grounds of objection to be examined by persons skilled in any branch of technical science, and otherwise take steps for elucidating the matter.

§26.

If the grant of the patent is decided upon, the Patent Office will cause a notice to that effect to be published in the Reichsanzeiger, and issue a document to the patentee.

If the patent is refused, this will also be publicly notified. Upon the refusal, the provisional protection will be held void.

THE PATENT ACT OF CANADA.

HER Majesty, by and with the advice and consent of the Senate and House of Commons of Canada, enacts as follows:

SHORT TITLE.

1. This Act may be cited as The Patent Act, 35 V., c. 26, s. 53.

APPLICATION FOR PATENTS.

10. Every inventor shall, before a patent can be obtained, make oath, or, when entitled by law to make an affirmation instead of an oath, shall make an affirmation, that he verily believes that he is the inventor of the invention for which the patent

544 is asked, and that the several allegations in the petition contained are respectively true and correct.

2. In the event of the inventor being dead, such oath or affirmation shall be made by the applicant, and shall state that he verily believes that the person whose assignee or legal representative he is, was the inventor of the invention for which the patent is solicited, and that the several allegations in the petition contained are respectively true and correct.

3. Such oath or affirmation may be made before
545 a minister plenipotentiary, *charge d'affaires*, consul, vice-consul, or consular agent, a judge of any court, a notary public, a justice of the peace, or the mayor of any city, borough or town, or a commissioner for taking affidavits, having authority or jurisdiction within the place where the oath may be administered. 55-56 V., c. 24, s. 2.

11. The applicant for a patent shall, for the purposes of this Act, elect his domicile at some known and specified place in Canada, and shall mention the same in his petition for a patent. 35 V., c. 26, s. 12.

12. The applicant shall, in his petition for a pat-
546 ent, insert the title or name of the invention, and shall, with the petition, send in a specification in duplicate of the invention, and an additional or third copy of the claim or claims. 56 V., c. 34, s. 1.

13. The specification shall correctly and fully describe the mode or modes of operating the invention, as contemplated by the inventor, and shall state clearly and distinctly the contrivances and things which he claims as new and for the use of which he claims an exclusive property and privilege.

2. Such specification shall bear the name of the 547
place where, and the date when it is made, and shall be signed by the inventor, if he is alive, and if not, by the applicant, and by two witnesses to such signature of the inventor or applicant.

3. In the case of a machine, the specification shall fully explain the principle and the several modes in which it is intended to apply and work out the same.

4. In the case of a machine, or in any other case in which the invention admits of illustration by means of drawings, the applicant shall also, with his application, send in drawings in duplicate, 548
showing clearly all parts of the invention, and each drawing shall bear the signature of the inventor, if he is alive, and if not, of the applicant, or of the attorney of such inventor or applicant, and shall have written references corresponding with the specification; but the commissioner may require further drawings or dispense with any of them, as he sees fit.

CONFLICTING APPLICATIONS.

19. In case of conflicting applications for any patent, the same shall be submitted to the arbitration of three skilled persons, two of whom shall be chosen by the applicants, one by each, and the third 549
of whom shall be chosen by the commissioner or by the deputy commissioner or by the person appointed to perform the duty of that officer; and the decision or award of such arbitrators, or of any two of them, delivered to the commissioner in writing, and subscribed by them or any two of them, shall be final, as far as concerns the granting of the patent.

* * * * * * *

named by the commissioner, which shall be paid by the applicants jointly. 35 V., c. 26, s. 43, part.

550 GRANT AND DURATION OF PATENTS.

20. Every patent granted under this Act shall contain the title or name of the invention, with a reference to the specification, and shall grant to the patentee and his legal representatives, for the term therein mentioned, from the granting of the same, the exclusive right, privilege and liberty of making, constructing and using, and vending to others to be used, the said invention, subject to adjudication in respect thereof before any court of competent jurisdiction.

2. In cases of joint applications, the patents shall be granted in the names of all the applicants. 35
551 V., c. 26, s. 10, part, and s. 16; 36 V., c. 44, s. 5.

21. Every patent shall be issued under the seal of the Patent Office and the signature of the commissioner or of the deputy commissioner, and when duly registered shall be good, and shall avail the grantee and his legal representatives for the term mentioned in the patent. 56 V., c. 34, s. 2.

2. The commissioner may require that any patent before it is signed by the commissioner or by any other member of the Queen's Privy Council for Canada, acting for him, and before the seal hereinbefore mentioned is affixed to it, shall be examined
552 by the Minister of Justice; and if such examination is so required, the Minister of Justice shall, accordingly, examine it, and if he finds it conformable to law, he shall certify accordingly, and such patent may then be signed, and the seal affixed thereto. 35 V., c. 26, s. 6, part, and s. 18.

22. The term limited for the duration of every patent of invention issued by the Patent Office shall be eighteen years; but at the time of the application therefor it shall be at the option of the applicant to pay the full fee required for the term of six

years, or the partial fee required for the term of 553
twelve years. 55-56 V., c. 24, s. 5.

2. If a partial fee only is paid, the proportion of the fee paid shall be stated in the patent, and the patent shall, notwithstanding anything therein or in this Act contained, cease at the end of the term for which the partial fee has been paid, unless before the expiration of the said term the holder of the patent pays the fee required for the further term of six or twelve years, and obtains from the Patent Office a certificate of such payment in the form which is, from time to time, adopted, which certificate shall be attached to and refer to the patent, and shall be under the signature of the com- 554
missioner or of the deputy commissioner. 56 V., c. 34, s. 3.

3. If such second payment, together with the first payment, makes up only the fee required for twelve years, then the patent shall, notwithstanding anything therein or in this Act contained, cease at the end of the term of twelve years, unless at or before the expiration of such term the holder thereof pays the further fee required for the remaining six years, making up the full term of eighteen years, and obtains a like certificate in respect thereof. 55-56 V., c. 24, s. 5.

ASSIGNMENTS. 555

25. The patent may be granted to any person to whom the inventor, entitled under this Act to obtain a patent, has assigned or bequeathed the right of obtaining the same, or in default of such assignment or bequest, to the legal representatives of the deceased inventor. 35 V., c. 26, s. 8;—36 V., c. 44, s. 2.

556 FORFEITURE OF PATENTS.

37. Every patent granted under this Act shall be subject, and be expressed to be subject, to the following conditions:—

(a.) That such patent and all the rights and privileges thereby granted shall cease and determine, and that the patent shall be null and void at the end of two years from the date thereof, unless the patentee or his legal representatives, or his assignees, within that period or any authorized extension thereof, commence, and after such commencement, continuously carry on in Canada, the construction or manufacture of
557 the invention patented, in such a manner that any person desiring to use it may obtain it, or cause it to be made for him at a reasonable price, at some manufactory or establishment for making or constructing it in Canada;

(b.) That if, after the expiration of twelve months from the granting of a patent, or any authorized extension of such period, the patentee or patentees, or any of them, or his or their representatives, or his or their assignee, for the whole or a part of his or their interest in the patent, imports, or causes to be imported into Canda, the invention
558 for which the patent is granted, such patent shall be void as to the interest of the person or persons importing or causing to be imported as aforesaid:

2. (a.) Any question which arises as to whether a patent, or any interest therein, has or has not become void: under the provisions of this section, may be adjudicated upon by the Exchequer Court of Canada, which court shall have jurisdiction to decide any such question upon information in the name of the Attorney General of Canada, or at the suit of any person interested:

3. (b.) This section shall not be held to take away or affect the jurisdiction which any Court other than the Exchequer Court of Canada possesses. 55-56 V., c. 24, s. 6. 559

2. Whenever a patentee has been unable to carry on the construction or manufacture of his invention within the two years hereinbefore mentioned, the commissioner may, at any time not more than three months before the expiration of that term, grant to the patentee an extension of the term of two years on his proving to the satisfaction of the commissioner that he was, for reasons beyond his control, prevented from complying with the above condition: 560

3. The commissioner may grant to the patentee, or to his legal representatives or assignee for the whole or any part of the patent, an extension for a further term not exceeding one year, beyond the twelve months limited by this section, during which he may import or cause to be imported into Canada the invention for which the patent is granted, if the patentee or his legal representatives, or assignee for the whole or any part of the patent, show cause, satisfactory to the commissioner, to warrant the granting of such extension; but no extension shall be granted unless application is made to the commissioner at some time within three months before the expiry of the twelve months aforesaid, or of any extension thereof. 35 V., c. 26, s. 28;—38 V., c. 14, s. 2;—45 V., c. 22, s. 1. 561

PATENT FEES.

39. The following fees shall be payable before an application for any of the purposes herein men-

562 tioned shall be received by the Commis ioner, that is to say,—

	$ cts.
Full fee for 18 years	60 00
Partial fee for 12 years	40 00
Partial fee for 6 years	20 00
Fee for further term of 12 years..	40 00
Fee for further term of 6 years....	20 00

THE LAW OF GREAT BRITAIN, IRELAND and THE ISLE OF MAN.

(From Patent Laws of the World, Collected, Edited and Indexed. By Alfred Carpmael, So-
563 licitor, etc., and Edward Carpmael, B. A. Patent Agent, etc.) Second edition, Revised. London. William Clowes and Sons, Limited, 27 Fleet St., 1889")

GREAT BRITAIN, IRELAND and THE ISLE OF MAN. LAW OF 25TH AUGUST, 1883.

Sealing of patent.

12. (1) If there is no opposition, or, in case of opposition, if the determination is in favor of the grant of a patent, the comptroller shall cause a patent to be sealed with the seal of the Patent Office.

564 (2) A patent so sealed shall have the same effect as if it were sealed with the Great Seal of the United Kingdom.

(3) A patent shall be sealed as soon as may be, and not after the expiration of fifteen months from the date of application, except in the cases hereinafter mentioned, that is to say—

(*a*) Where the sealing is delayed by an appeal to the law officer, or by opposition to

the grant of the patent, the patent may be sealed at such time as the law officer may direct. 565

(b) If the person making the application dies before the expiration of the fifteen months aforesaid, the patent may be granted to his legal representative and sealed at any time within twelve months after the death of the applicant.

Date of Patent.

13. Every patent shall be dated and sealed as of the day of the application: Provided that no proceedings shall be taken in respect of an infringement committed before the publication of the complete specification: Provided also, that in case of more than one application for a patent for the same invention, the sealing of a patent on one of those applications shall not prevent the sealing of a patent on an earlier application. 566

Provisional Protection.

14. Where an application for a patent in respect of an invention has been accepted, the invention may during the period between the date of the application and the date of sealing such patent be used and published without prejudice to the patent to be granted for the same; and such protection from the consequences of use and publication is in this Act referred to as provisioned protection. 567

Protection by Complete Specification. Effect of Acceptance of Complete Specification.

15. After the acceptance of a complete specification and until the date of sealing a patent in respect thereof, or the expiration of the time for sealing, the application shall have the like privileges

568 and rights as if a patent for the invention had been sealed on the date of the acceptance of the complete specification: Provided that an applicant shall not be entitled to institute any proceeding for infringement, unless and until a patent for the invention has been granted to him.

Extent of Patent.

16. Every patent when sealed shall have effect throughout the United Kingdom and the Isle of Man.

Term of Patent.

569 17. (1) The term limited in every patent for the duration thereof shall be fourteen years from its date.

(2) But every patent shall, notwithstanding anything therein or in this Act, cease if the patentee fails to make the prescribed payments within the prescribed times.

570

CIRCUIT COURT OF THE UNITED STATES, 571

SOUTHERN DISTRICT OF NEW YORK.

VICTOR TALKING MACHINE COMPANY, *et al.*, vs. LEEDS & CATLIN COMPANY.	In Equity. No. 8797, 8798.
VICTOR TALKING MACHINE COMPANY, *et al.*, vs. THE TALK-O-PHONE COMPANY.	In Equity. No. 8859, 8860. 572

State and County of New York, ss.:

T. COMMERFORD MARTIN being duly sworn, says:

During the month of August, 1888, and for some time prior thereto, I was an associate editor of the Electrical World, a weekly review then published 573
in the City of New York, and at said time Mr. Joseph Wetzler was also an associate editor with me of the said Electrical World. At that time the office of the Electrical World was in the Potter Building, New York City. I have continued my connection with the Electrical World since that time down to the present day, the name of the publication now being, however, the Electrial World and Engineer, with offices at 114 Liberty Street in the City of New York.

My attention has been called to an article enti-

574 tled "The Improved Gramophone," published in the Electrical World for August 18, 1888 on page 80 thereof. Prior to August 18, 1888, Mr. Joseph Wetzler and I had known Mr. Emile Berliner. At the invitation of Mr. Emile Berliner, Mr. Joseph Wetzler and I visited Mr. Berliner in the City and County of New York. According to my present recollection we visited Mr. Berliner on the occasion stated, at the Union Square Hotel. As stated in the said article in the Electrical World for August 18, 1888, we visited Mr. Berliner on the occasion aforesaid, prior to August 18, 1888, and about a week prior to that date. Mr. Berliner in-
575 vited us to his bedroom in the hotel for the purpose of exhibiting to us the improved gramophone. Mr. Wetzler and I went to Mr. Berliner's bedroom in the hotel at said time and thereupon Mr. Emile Berliner exhibited to us the recording and reproducing of sound by means of the gramophone. I recollect that by means of the gramophone reproducing machine, Mr. Berliner played or reproduced several songs and records, as stated in the said article in the Electrical World for August 18, 1888. The reproducing machine used by Mr. Berliner on the said occasion for the reproduction of sound from the said records is illustrated in the said article in
576 the Electrisal World for August 18, 1888, being designated as the "improved Berliner Gramophone." I recollect that the reproducing stylus connected to the diaphragm was permitted to rest by its own gravity in the reproducing-groove of the record, and that when the plate was made to revolve, it not only vibrated the diaphragm and produced the sound, but it also led the diaphragm-box across the disc from periphery to center.

My recollection of the reproducing gramophone accords with the description of it given in the said article in the Electrical World for August 18, 1888.

On the occasion aforesaid, Mr. Berliner presented me with one of the records used for reproducing sound upon the machine. The disc carrying the record was made to revolve by hand, the crank being turned by the hand and causing the disc to revolve, as shown in the illustration in said article in the Electrical World for August 18, 1888. 577

I do not know what has become of the record presented by Mr. Berliner to me upon that occasion. I recollect that the record had the date marked upon it. I recollect also that upon the said occasion Mr. Berliner demonstrated to us the manner of making a record. He poured a fluid preparation upon the surface of the disc, thus coating the surface of the disc, and then traced the record into this layer or coating, as set forth in the said article in the Electrical World for August 18, 1888. 578

The article entitled "The Improved Gramophone," published in the Electrical World for August 18, 1888 on page 80 thereof as aforesiad, was written by Mr. Joseph Wetzler above named. I remember the publication of the article, the occasion referred to, the presence of Mr. Berliner, Mr. Wetzler and myself, the reproduction of sound by Mr. Berliner and myself from records thereof, by means of the gramophone reproducing machine illustrated in the said article and operated as aforesaid, and the making of a sound record by Mr. Berliner as aforesaid, and the giving of the said record to me by Mr. Berliner upon the said occasion. 579

T. COMMERFORD MARTIN.

Subscribed and sworn to before me this 10th day of November, 1905.

Walter E. Holloway,
[SEAL.] Notary Public, No. 179,
New York Co.

580 CIRCUIT COURT OF THE UNITED STATES,

SOUTHERN DISTRICT OF NEW YORK.

VICTOR TALKING MACHINE COMPANY, *et al.* vs. LEEDS & CATLIN COMPANY.	In Equity No. 8797.
VICTOR TALKING MACHINE COMPANY 581 vs. THE TALK-O-PHONE COMPANY.	In Equity No. 8859.

Kingdom of Great Britain,
County of London,
Consulate-General of the United States of America. } ss.:

Joseph Wetzler, being duly sworn, says:

582 During the month of August, 1888, and prior thereto, I was an associate editor of the Electrical World, a weekly review published in the City of New York, having its office in the Potter Building. Mr. T. Commerford Martin was at the time an associate editor of the Electrical World with me, and prior to August 18, 1888, we had both been acquainted with Mr. Emile Berliner.

As an editor of the Electrical World, I wrote the article entitled "The Improved Gramophone,"

published in the Electrical World for August 18, 1888, on page 80. Prior to August 18, 1888, Mr. Emile Berliner invited Mr. Martin and me to witness the recording and reproducing of sound by means of the gramophone, and upon such invitation Mr. Martin and I, together with one or two other persons, whose names 583

visited Mr. Berliner in the City and County of New York during the week preceding August 18, 1888. According to my recollection we visited Mr. Berliner upon said occasion at the Union Square Hotel, and Mr. Berliner then and there invited us to his bedroom where he exhibited to us the recording and reproducing of sound by means of the gramophone. What took place upon that occasion I have correctly set forth in the said article entitled "The Improved Gramophone," published in the Electrical World for August 18, 1888, on page 80 thereof. Mr. Berliner reproduced for us several sound records by means of the gramophone reproducing machine illustrated in the said article. The sound records employed were the phonautographic records. Upon the said occasion Mr. Berliner demonstrated for us the process of making a phonautographic record by etching the record into metal. As stated in the said article, "He took a small disc of zinc, poured upon it a quickly evaporating fluid which left an exceedingly thin layer of spongy and fatty wax, traced into this layer a phonautographic record and etched the same with chromic acid. In less than 15 minutes, on examining the zinc plate through a magnifying glass, we observed the beautiful tracings of articulate speech as a line sunken below the surface of the metal with all its delicate waves in most pecu- 584 585

586 liar varities as representing the various sounds of the human voice." The reproducing gramophone used by Mr. Berliner upon the said occasion is correctly described in the said article as follows:

> "As shown in the accompanying engraving there is no gear or machinery of any kind except a small friction wheel which revolves the table having clamped down upon it the reproducing disc. The reproducing stylus connected to the diaphragm is permitted to rest by its own gravity in the reproducing groove of the record, and when the plate is made to revolve it not only vi-
587 brates the diaphragm and reproduces the sound but it also leads the diaphragm box across the disc from periphery to centre so that the record groove serves at the same time as a screw instead of a separate gear. The recording diaphragm and stylus are attached to a lever which is pivoted at a distance of about 18 inches from the centre line of the disc, and as it slowly swings across the disc it describes an arc of very flat amplitude."

I remember the occasion of our visit to Mr. Berliner in the City of New York prior to August
588 18, 1888. I remember the visit itself, at which Mr. Berliner, Mr. Martin, I and others were present. I remember the making of a phonautographic record on that occasion by Mr. Berliner, by the method described in the said article. I remember the reproduction of sound by means of the gramophone, as described in said article and by means of the reproducing machine illustrated in the said article, and I remember writing the said article entitled "The Improved Gramophone," and the

publication of the said article in the Electrical 589
World for August 18, 1888, on page 80 thereof.

JOSEPH W. WETZLER.

Subscribed and sworn to before me }
this 9th day of November, 1905 }

[SEAL. Francis H. Trigout,
United States Deputy Consul-
Consulate- General of the
General, United States of
London.] America, at London.

590

591

592 February 18, 1905.

Horace Pettit, Esq.,
604 Stephen Girard Bldg.
Philadelphia, Pa.

Dear Sir:

In reply to your favor of February 16, I beg to say that I shall be pleased to let you have a copy of my record attacking the title of the American Gramophone Company to the Jones patent. The testimony is now being printed and I hope soon to be able to send you the copy requested. In the suit against the Leeds & Catlin Company the plea
593 to the title will come on for argument soon. I am interested to know what may be the condition of the suit against your clients.

Very truly yours,

Louis Hicks.

March 2, 1905.

Horace Pettit, Esq.,
604 Stephen Girard Building,
12th above Chestnut Street,
Philadelphia, Pa.

Dear Sir:

594 By reason of my absence from the city and pressing engagements I have been unable before to answer your favor of February 20, in regard to defendant's testimony on the plea in the suit of American Gramophone Company against Leeds & Catlin Company on the Jones patent. I was under the impression that the American Gramophone Company was suing the Victor Company on the Jones patent, although previously I had understood that some arrangement existed between the Victor and Graphophone Companies whereby the Victor Company could not be sued upon that

patent. I have recently been informed that the 595
suit which you are defending is not against the Victor Company but against the Universal Company, which I understand is controlled by the Victor Company. This presents a rather complicated situation, because if the Victor Company control the Universal Company and if the Victor Company could not be sued on the Jones patent the Universal Company would have nothing to lose by defeat. I should be very glad indeed to join hands with the Victor Company if that Company is interested in over-throwing the Jones patent. I have collected what I believe to be valuable material and evidence in defence of suits brought on the 596
Jones patent, but reflection makes me believe that it would be prejudicial to my clients to put that material and evidence at the disposal of counsel for use in other suits, unless I am fully informed of the precise situation and interests involved, and unless arrangements could be made so that the material and evidence could not be presented in the strongest possible manner. You will I am sure appreciate and understand the situation. It would not do for me to permit my material to go into your case at the very close thereof, if the proper foundation had not been laid in your case, and if the Universal Company is not for the reasons stated
or for other reasons vitally concerned in the over- 597
throwing of the Jones patent. Indeed if the Victor Company controls the Universal Company and if the Victor Company could not be sued on the Jones patent it would seem to me that the Victor Company and the Universal Company would be benefitted rather than injured by the sustaining of the Jones patent. Of course, I have no knowledge of my own and have merely heard what has been stated above; but Mr. Armstrong testified to something like this condition. As I personally

598 would like to join hands with the Victor Company, if circumstances permit, I trust that you will at once give me full information so that I may know how to act. Believe me,

Very respectfully yours,

Louis Hicks.

April 21, 1905.

Horace Pettit, Esq.,
604 Stephen Girard Building,
Philadelphia, Pa.

Dear Sir:

599 I received your favor of April 18th requesting adjournment of the argument of the demurrers in the four suits of the Victor Talking Machine Co. v. Leeds & Catlin Co. and v. The Talk-O-Phone Co. I am ready to argue these demurrers and am anxious so to do. I do not see how the demurrers can be reached for argument during the week beginning April 25th, unless the judge calling the calendar should hear only pleas and demurrers as Judge Wallace, for instance, sometimes does, and leaves the rest of the case coming on for final hearing for some Judge who does not sit in the Circuit Court of Appeals.

600 If the suits against the American Graphophone Co. by the Victor Co. and the suits of the American Graphophone Co. v. the Victor and Universal Cos. are to go over to the session of May 15th, I have no objections to our demurrers going over to that date. I am unwilling to do anything which would permit these cases coming on unexpectedly for final hearing to acquire precedence over any one of the four demurrers. I regret that I was not able to reply to your letter before, and I trust you will pardon the delay.

Very truly yours,

Louis Hicks.

June 14, 1905. 601

Horace Pettit, Esq.,
604 Stephen Girard Building,
Philadelphia, Pa.

Dear Sir:

I beg to acknowledge receipt of your favor of June 10, 1905, with reference to the demurrers in the suits of Victor Talking Machine Company *et al.* against Leeds & Catlin Company and against the Talk-O-Phone Company (four suits). I regret to learn that you are unwilling to join with me in a request to Judge Hazel to take these demurrers for decision without oral argument and upon 602
printed briefs.

In my letter to you of April 21, I stated that I was unwilling to do anything which would permit the Victor suits against the Graphophone Company to acquire precedence over any one of the four demurrers. I repeated that statement to your assistant, Mr. Kennedy, when the equity calendar was called, and I also called your attention to my understanding with Mr. Kennedy in the statement of my letter of April 21. Nevertheless, the calendar was so arranged that the suit against the Graphophone Company was argued and the demurrers were not argued. I protest against this. 603
Had the demurrers been put upon the calendar for argument when they should have been, they would have been argued and disposed of long ago.

In view of the agreement of December 8, 1903, between the Graphophone Company and the Victor Company, the submission of the demurrers in the four suits to Judge Hazel would be particularly appropriate and timely.

Very truly yours,

Louis Hicks.

604 Nov. 20, 1905.

Horace Pettit, Esq.,
604 Stephen Girard Bldg.,
Philadelphia, Pa.

Dear Sir:

With reference to the suits of the Victor T. M. Co. *et al.* against the Leeds & Catlin Co. and the Talk-O-Phone Co., I am waiting to receive from you a statement of your costs upon the overruling of the demurrers. I do not understand why you have not entered orders overruling the demurrers in order that the suits may be put at issue by the
605 filing of answers and replications, and evidence taken under the issues. In my opinion the patents sued upon are, without question, invalid, and defenses proving the invalidity of the patents exist and were not put in evidence in the suit against the American Graphophone Co. I understand that your clients have been making misleading statements to the trade, and that you have been enjoined from so doing by Judge Hazel in the suit against the Graphophone Co. It will not do for your clients to delay in bringing the above suits to final hearing, and in the meantime to make misleading statements to the trade. If this continues
606 I shall undoubtedly bring the matter before the Court for appropriate relief.

Very truly yours,

Louis Hicks.

Nov. 22, 1905.

Horace Pettit, Esq.,
604 Stephen Girard Bldg.,
Philadelphia, Pa.

Dear Sir:

I have your favor of Nov. 21, stating that you will forward to me a statement of the costs upon

the overruling of the demurrers. You must know 607
that I cannot answer in the four suits of the Victor Co. against the Leeds & Catlin Co. and the Talk-O-Phone Co. until you have entered orders overruling the demurrers. Surely you do not mean seriously to say that the Judge's opinion is an order upon which I can act. It has been your duty to serve me with copies of your proposed orders overruling the demurrers with notice of settlement, the said orders to provide that defendants shall answer within thirty days from the entry of the orders, and either to tax your costs or to notify me of the amount thereof, in order that upon payment of costs within thirty days after the 608
entry of the orders I may file answers on behalf of defendants. Because you failed to put the demurrers properly on the calendar for argument, great delay ensued before the demurrers appeared on the calendar, and because you are now omitting to do the things mentioned above, great delay is occurring in bringing the suits to issue.

Very truly yours,

Louis Hicks.

Nov. 22, 1905.

Horace Pettit, Esq.,
604 Stephen Girard Bldg.,
Philadelphia, Pa. 609

Dear Sir:

I beg to acknowledge receipt of copies of your two letters dated Nov. 17, 1905, to my client, the Talk-O-Phone Co. I have repeatedly informed you that, in my opinion, the Berliner patent No. 534,543 is invalid and void, and that if it ever had any validity, it has none to-day. Furthermore, I have informed you repeatedly that I have discovered evidence which, in my opinion, without question will prove the invalidity of the patent, and

610 I have also stated to you that the evidence to which I refer was not produced in the suit brought by your client, the Victor Talking Machine Co. against the American Graphophone Co. upon said patent. As you know, Judge Hazel in rendering his decision in said suit against the American Graphophone Co. suspended all relief pending appeal.

On Sept. 26, 1904, you brought suit on patent 534,543 against the Talk-O-Phone Co., and notwithstanding my repeated protests you have delayed, and are now delaying the prosecution of the suit. In view of your threatening letters to the trade and my client, which, in my opinion, are entirely
611 without justification, and in view of my repeated statement to you that, in my opinion, patent No. 534,543 is invalid and void, I hereby notify you that unless the Victor Talking Machine Co. ceases from the sending of threatening circular letters and proceeds at once with the prosecution of its case against the Talk-O-Phone Co., in order that the question of the invalidity and nullity of the patent may, at an early date, be passed upon by the court, I shall forthwith apply to the court for appropriate relief. Your statement that the improved Talk-o-phone, operating by a mechanical feed-device, is an infringement of patent No. 534,543, supposing that said patent is not invalid
612 and void, is untenable and without justification, since you must know that mechanical feed-devices anticipated the Berliner patent by many years. On behalf of the Talk-O-Phone Co., I desire to say that your clients will be held strictly accountable for any misrepresentation made by them with reference to the improved Talk-o-phone.

Very truly yours,

Louis Hicks,
Counsel for the Talk-O-Phone Co.

Nov. 29, 1905. 613

Horace Pettit, Esq.,
604 Stephen Girard Bldg.,
Philadelphia, Pa.

Dear Sir:

I have your favor of Nov. 27, requesting payment of costs upon the overruling of the demurrers in Victor T. M. Co. *et al.* against Leeds & Catlin Co. (two suits, Nos. 8797 and 8798). As it was only upon my urgent request that you entered the orders overruling the demurrers and sent me a statement of the amount of your costs, I did not suppose that you expected check by return mail, but 614
that I should have a reasonable opportunity to request my clients to remit the amount. However, from your letter of Nov. 27 it would seem that you desired check at once. Hence I enclose my check to your order for $30.35, being the amount named in your letter of Nov. 23. I have my answers in the suits well under way and shall file them at the earliest possible moment, as soon as the clerical work of copying can be done and signatures and verifications had. I have the first case to argue on the equity calendar for Dec. 4, and the first case in the Circuit Court of Appeals for Dec. 5. These are very important cases which have required very
much attention, but I shall let nothing else interfere with the filing of the answers in these suits, in 615
order that they may be at once brought to an issue and tried upon their merits.

Very truly yours,

Louis Hicks.

616 Mar. 16, 1906.

Horace Pettit, Esq.,
Counsel for Victor Talking Machine Co.,
604 Stephen Girard Bldg.,
Philadelphia, Pa.

Dear Sir:

The Talk-O-Phone Co. has referred to me copies of a circular letter signed and sent by you under date of March 7 and 10, 1906 to numerous customers of the Talk-O-Phone Co. You say that on behalf of your client you desire to call attention to the fact that you hold that the disc talking ma-
617 chines and records heretofore manufactured by the Talk-O-Phone Company is a clear infringement of the Victor Talking Machine Company's patents. You are well aware that the Talk-O-Phone Company has never manufactured records, and you also know that the Victor Talking Machine Company's patent for a record was recently overthrown by Judge Hazel in a decision filed Feb. 19, 1906, before the writing of your misleading and threatening letter.

With reference to the disc talking machines manufactured and sold by the Talk-O-Phone Co., you say that the Victor Talking Machine Company has now a suit pending against the Talk-O-Phone
618 Co. for infringement of Berliner patent No. 534,543, and that it is your intention promptly to move for preliminary injunction. If such has been your intention, why have you not made your motion instead of sending your threatening letters to the trade of the Talk-O-Phone Company? During the past year I have repeatedly protested against your delay in bringing your suit against the Talk-O-Phone Co. to a hearing, while you were prosecuting your suit against the American Graphophone Co. on the same patent under an

agreement between the Victor and Graphophone Companies, to the effect that if the Graphophone Co. should lose the suit, a license would be given by the Victor Co. to the Graphophone Co. to operate under the patent. I have also repeatedly informed you that in my opinion the Berliner patent No. 534,543 for gramophone is invalid, and that I am prepared to show the invalidity of the patent to the court. It is upon this Berliner patent that your suit against the Graphophone Co. was conducted and upon which you brought suit against the Talk-O-Phone Co. I desire to say that unless you move for preliminary injunction at once against the Talk-O-Phone Co. and make good your threat to the trade so to do, I will move the court to dismiss your suit against the Talk-O-Phone Co., by reason of your failure to prosecute the same. The Victor Talking Machine Co. will be held strictly accountable for the damage done to the Talk-O-Phone Co., by reason of the threatening letters and circulars heretofore sent to the trade. Why you perfer to intimidate the trade instead of making your motion for preliminary injunction is difficult to understand, unless it be that you yourself realize the invalidity of the patent upon the basis of which you make your threats. 619 620

In your letters to the trade you claim that the "mechanical feed" device by which the new and improved talk-o-phone operates is an infringement upon your said Berliner patent. You must know that your claim can have no reasonable basis, and that mechanical feed devices anticipated the Berliner patent by many years. The Talk-O-Phone Co. is prepared to show, first: that your Berliner patent No. 534,543 is invalid, and second: that the mechanical feed device is not an infringement of that patent, even if the patent were valid. I therefore, call upon you at once to make your motion 621

622 for preliminary injunction and to discontinue the sending of misleading and threatening letters to the trade.

Very truly yours,

Louis Hicks,
Counsel for Talk-O-Phone Co.

Philadelphia, March 3, 1905.

Louis Hicks, Esq.,
25 Pine Street, New York, N. Y.

Dear Sir:

I have your favor of the 2d inst., and contents
623 noted. I would say that both the Universal Talking Machine Mfg. Co. and the Victor Talking Machine Company are fighting the suit on the Jones patent as hard as they know how, and mean to leave no stone unturned in the defense.

Of the two suits against this Company the suit which is now being prosecuted is the suit in the Southern District of New York, against the Universal Talking Machine Mfg. Company. Of course, if the patent should, for any reason, be sustained in this suit after appeal, a decree could very readily be had against the Victor Company, if it should be shown that they are using the same
624 process. There is no agreement or understanding between the Victor Company and the American Graphophone Company, whatsoever looking to the bolstering up or sustaining of the Jones patent. On the other hand, we are using every effort to present as full and complete a defense in the Universal suit as possible.

All that it was my intention to ask you was to let me see a copy of your testimony taken in the suit on this patent against your client on your pleading, which testimony I understood would very shortly be filed in order to argue the plea, for which

reason I assumed you would have no objection to letting me see a copy of the same a little in advance. I was merely referring to such evidence as you may have produced concerning the title, or want of title in the A. G. Co. to the Jones patent. 625

Yours very truly,

Horace Pettit.

K.

Philadelphia, Apr. 18, 1905.

Louis Hicks, Esq.,
25 Pine St., New York City.

Dear Sir: 626

I understand there will be a one week's session of the Circuit Court beginning April 25th, and a four week's session beginning May 15th.

I suppose it will be agreeable to you, if we agree to have our Leeds & Catlin and Talk-O-Phone demurrers set for argument at the session beginning May 15th. Will you kindly let me hear from you.

Very truly yours,

Horace Pettit.

K.

Philadelphia, April 22, 1905.

Re V. T. M. Co. vs. Leeds & Catlin. 627
V. T. M. Co. vs. Talk-O-Phone Co.

Louis Hicks, Esq.,
25 Pine St., New York City.

Dear Sir:

Replying to your favor of the 21st inst. I beg to advise you that we have arranged to have the suits of the V. T. M. Co. vs. Amer. G. Co. and of the Amer. G. Co. vs. the Universal Co. heard at the

session beginning May 15th. I do not intend to try them during the week beginning April 25th.

In view of this, I understand that you have no objection to arranging to have our demurrers heard at the same session.

Very truly yours,

Horace Pettit.

K.

Philadelphia, June 10, 1905.

Victor Talking Machine Co., *et al.*
v. Leeds & Catlin Co.
Same v. The Talk-O-Phone Co.

Louis Hicks, Esq.,
25 Pine Street, New York City.

Dear Sir:

I regret very much that the demurrers in the above cases were not reached for argument upon the present equity calendar, and that they have to be postponed until fall. I doubt very much whether Judge Hazel would consider them under submission without argument, as these cases are among those which he has already formally continued until fall.

I prefer, at all events, to let the Court have the benefit of an oral argument.

Very truly yours,

Horace Pettit.

Philadelphia, June 15, 1905.

Louis Hicks, Esq.,
25 Pine St., New York City.

Dear Sir:

Referring to your favor of the 14th inst., would say that I regret very much, as stated before, that the cases could not be reached for argument on the

Equity calendar just concluded, I, of course, have 631
nothing to do with the arrangement of the calendar, and the fact that the cases were not reached was, of course, the fault of neither of us. I was particularly anxious to have these demurrers argued at this Term of Court, but, as indicated in my last letter, while I think there is nothing in the points which you raise, I desired the opportunity of an oral argument, which, therefore, precluded submitting the demurrers on brief.

Very truly yours,

Horace Pettit.

P.

Victor Talking Machine Company, 632
Camden, N. J., March 6, 1906.

To the Trade :

We beg to advise you that we have just received a communication from our counsel, Horace Pettit, Esq., notifying us that the United States Circuit Court of Appeals, of New York, in our suit against the American Graphophone Company, filed an opinion, March 1st, 1906, in our favor, affirming the decision of Judge Hazel of the lower court, of September 21st, 1905, sustaining our fundamental Berliner patent, No. 534,543, for the combination of our disc talking machines and records and 633
method of operating the same.

As the decision of this Court is final, we expect to at once proceed to enforce our rights by preliminary injunction against all infringers, including all manufacturers of infringing machines and records, who have not taken a license from us, and dealers in such infringing goods. We would call your attention to the fact that the American Graphophone Company has already taken a license, as also the Universal Talking Machine Manufacturing Company.

Yours very truly,

Leon F. Douglass,

Vice-Presdt.

634 Philadelphia, March, 7, 1906.

Messrs. J. P. Crotty & Co.,
Minneapolis, Minn.

Gentlemen:

My client, the Victor Talking Machine Company, of Camden, N. J., has reason to believe that you are selling and handling, or about to sell and handle, disc talking machines and records manufactured and sold, and advertised for sale, by a company known as the Talk-O-Phone Company, having an office, among other places, in Toledo, Ohio.

635 On behalf of my client, I desire to call your attention to the fact that we hold that the disc talking machine and records heretofore manufactured by the Talk-O-Phone Company is a clear infringement of the Victor Talking Machine Company's patents, among other, the Berliner patent No. 534,543, issued February 19, 1895, for Gramophone. The disc talking machine manufactured and sold by the Talk-O-Phone Company is, we contend, a clear infringement of claims 5 and 35 of this patent, which have just been sustained by the United States Circuit Court of Appeals of New York, in a decision filed March 1, 1906, affirming the decision of Judge Hazel in the Court below in
636 the suit of the Victor Talking Machine Company against the American Graphophone Company. The claims sustained cover the reproducing apparatus and method of operating the same, such as embodied in the said Talk-O-Phone machines for reproducing sound from disc records.

The Victor Talking Machine Company has now a suit pending in the United States Circuit Court for the Southern District of New York against the said Talk-O-Phone Company, for infringement of the said patent, which will be expeditiously prosecuted, and I would add that it is our intention to promptly move for preliminary injunction.

We also learn from certain advertisements of the 637
Talk-O-Phone Company, that since the decision of the Lower Court of September 21, 1905, sustaining this Berliner Patent, No. 534,543, the Talk-O-Phone Company has been advertising and illustrating in its advertisements, a disc talking machine constructed and operated substantially in accordance with the said claims of the said Berliner Patent No. 534,543, with a so-called "mechanical feed" device, superadded, as we believe, in an attempt to evade the claims of this patent. We desire also to call attention to the fact that, as we understand this mechanical feed device, it can have no useful function to perform, and we 638
believe it to be added merely as an attempt to evade our patent. We believe that this attempt will be regarded by the Courts as a mere evasion, and will be held to infringe the claims.

We desire to give you notice of this fact, as it is only fair that you should have knowledge that the Victor Company regards this Talk-O-Phone machine with the so-called "mechanical feed" for reproducing from disc records, which is being quite extensively advertised, as a clear infringement of its said patent, as well as the machine which the Talk-O-Phone Company has been heretofore manufacturing and selling, and that it embodies the principle and features of our said fundamental 639
patent, notwithstanding certain statements made by the Talk-O-Phone Company to the contrary.

I will be pleased to give you further information relative to the decisions sustaining this patent, and to forward you a copy upon hearing from you, or your counsel.

I remain,

Yours very truly,

Horace Pettit.

The same to Keen Talking Machine Company, Philadelphia, Pa., dated March 10, 1906.

The same to Rogers Manufacturing Company, New York City, dated March 10, 1906.

640 At a stated term of the Circuit Court of the United States, for the Southern District of New York, held in the court-room in the County of New York on the day of June, 1905.

Present—Hon. JOHN R. HAZEL, U. S. Judge.

VICTOR TALKING MACHINE COMPANY, *et al.*, Complainant, vs. TALK-O-PHONE COMPANY. Defendant.	Nos. 8859 and 8860 on Berliner Patents Nos. 534,543 and 548,623.
VICTOR TALKING MACHINE COMPANY, *et al.*, Complainant, vs. LEEDS & CATLIN COMPANY, Defendant.	Nos. 8797 and 8798 on Berliner Patents Nos. 534,543 and 548,623.

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The suit of the Victor Talking Machine Company *et al.* against the American Graphophone Company on Berliner Patent No. 534543, having come on to be heard at final hearing, and having been argued at final hearing before me on June 5 and June 6, 1905, by counsel for complainants and defendant in that suit, and at the close of the argument on June 6, 1905, Louis Hicks, solicitor and counsel for defend-

ants in the four above entitled suits against the 643
Leeds & Catlin Company and the Talk-o-Phone Company, having moved the Court for permission to address the Court with reference to the contract of December 8, 1903, between the Victor Talking Machine Company and the American Graphophone Company appearing in the record in said suit between said two Companies; on reading and filing the annexed affidavit of Louis Hicks, verified June 8th, 1905, it is

Ordered that the said motion be, and the same hereby is denied.

U. S. Judge. 644

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646 CIRCUIT COURT OF THE UNITED STATES,

SOUTHERN DISTRICT OF NEW YORK.

VICTOR TALKING MACHINE COMPANY, *et al.*, Complainants, vs. TALK-O-PHONE COMPANY, Defendant.	In Equity. Two Suits Nos. 8859 and 8860. Berliner Patents Nos. 534,543 and 548,623.

647

VICTOR TALKING MACHINE COMPANY, *et al.*, Complainants, vs. LEEDS & CATLIN COMPANY, Defendant.	In Equity. Two Suits Nos. 8797 and 8798. Berliner Patents Nos. 534,543 and 548,623.

State and County of New York, ss.:

Louis Hicks, being duly sworn, says: that he is
648 a solicitor and counsel for the defendants in the above four suits in equity now pending undetermined in this Court upon the Berliner Patents above named; that each of the above four suits is at issue on demurrer; has been ready for argument at each session of the April, 1905, Term of this Court; that deponent is also solicitor and counsel for the above named defendants in two suits on the Jones Patent, brought by the American Graphophone Company; that the said two suits on the Jones Patent were argued on plea and demurrer before Judge Hazel on May 31, 1905; that in addition to

the foregoing six suits on the said Jones and Ber- 649
liner patents there appeared on the same April, 1905, Term of this Court, a suit of the American Graphophone Company against the Universal Talking Machine Company on the said Jones Patent, ready for final hearing and the suit by the Victor Talking Machine Company, *et al.* against the American Graphophone Company on said Berliner Patent No. 534543, also ready for final hearing; that on motion of S. O. Edmonds, Esq., counsel for the American Record Company, against which a suit had been brought by the American Graphophone Company on said Jones Patent, his Honor, Judge Platt, deferred the argument at 650
final hearing in the Graphophone Company's suit on the Jones Patent against the Universal Talking Machine Company, to the end that other parties defending suits upon the same patent should have an opportunity to present their defenses to suits based upon said Jones Patent; that the Universal Talking Machine Company is owned or controlled by the Victor Talking Machine Company; that on June 5 and 6, 1905, the suit of the Victor Talking Machine Company against the American Graphophone Company on said Berliner Patent No. 534543, was argued at final hearing; that it appeared upon the argument and from the record in
said suit that a contract dated December 8, 1903, 651
exists between the Victor Talking Machine Company and the American Graphophone Company with reference to said Jones and Berliner Patents; that deponent did not learn of the existence of that contract or the contents thereof, until said argument on June 5, 1905; that on March 2, 1905, deponent wrote to Horace Pettit, Esq., counsel for the Victor Talking Machine Company with reference to the suit pending against the Universal Talking Machine Company on the Jones Patent,

652 stating that he was informed that the Victor Talking Machine Company controlled the Universal Company, and that some agreement existed between the American Graphophone Company and the Victor Talking Machine Company by virtue of which it would not be to the interest of the Victor Talking Machine Company to defeat the suit brought by the Graphophone Company on the said Jones Patent, and requested information as to the precise situation and interests involved as a condition precedent to the giving by deponent to Mr. Pettit of material collected by deponent with reference to the said Jones Patent; that on March
653 3, 1905, Mr. Pettit replied to deponent's letter of March 2, 1905, which mislead deponent because Mr. Pettit made no mention of the contract of December 8, 1903, above mentioned, and said with reference to suit against the Universal and the Victor Companies on the Jones Patent as follows: "Of the two suits against this Company the suit which is now being prosecuted is the suit in the Southern District of New York against the Universal Talking Machine Company. Of course, if the patent should, for any reason, be sustained in this suit after appeal, a decree could very readily be had against the Victor Company, if it should be shown that they are using the same process.
654 There is no agreement or undertaking between the Victor Company and the American Graphophone Company whatsoever looking to the bolstering up or sustaining of the Jones Patent. On the other hand, we are using every effort to present as full and complete a defense in the Universal suit as possible."

When deponent learned on June 5, 1905, of the agreement of December 8, 1903, it conclusively appeared to deponent that the suit between the American Graphophone Company and the Victor

Talking Machine Company on Berliner Patent No. 534543, was a suit in which the American Graphophone Company had nothing to lose and that the American Graphophone Company as well as the Victor Talking Machine Company would be benefited if the said Berliner Patent were held by the Court to be valid, and if infringement thereof were found; that it further appeared to deponent that the said suit was a suit which would not affect the American Graphophone Company if the patent were sustained, but would affect the competitors of the American Graphophone Company and the Victor Talking Machine Company by reason of the provisions of the Contract of December 8, 1903. That it appears from Paragraphs 3 and 4 of the said contract of December 8, 1903, that in case the said Berliner Patent is sustained against the Graphophone Company, the Graphophone Company shall assist the Victor Company in the prosecution of suits upon the said patent against other parties, and that in case the said Jones Patent is sustained in the suit of the Graphophone Company against the Victor Company the Victor Company shall assist the Graphophone Company in the prosecution of suits upon the Jones Patent against other parties. The other provisions of the contract of December 8, 1903, are of like purport and affect. 655 656 657

By reason of the premises and of such information as deponent had, deponent as solicitor and counsel for the defendants named, joined with Waldo G. Morse, representing other parties in interest, in a motion addressed to the Court, held by his Honor, Judge Hazel, for permission to address the Court with reference to said agreement of December 8, 1903, and for permission to file a memorandum in regard thereto. It being deponent's opinion that it was necessary for the protection of his clients, the defendants above named, to point out

658 to the Court the apparent purpose and effect of the agreement of December 8, 1903, and the protest of defendants above named against the entertaining by the Court of the said suit on said Berliner Patent in view of the circumstances disclosed by the agreement of December 8, 1903, and against any decision in such suit or the use of any decision in such suit as a basis for relief by way of preliminary injunction against other persons sued by the Victor Company upon said Berliner Patent. His Honor, Judge Hazel, in denying the respective applications of Mr. Morse and of deponent, stated that an entry might be made in
659 the minutes of the Court, and in order that the position of these defendants may be made matter of record, the annexed order is hereby presented to the Court in order that it may be signed and filed at once among the other papers in the above entitled suits.

LOUIS HICKS.

Subscribed and sworn to before me
this 8th day of June, 1905.

[SEAL.] T. P. Dalton,
Notary Public,
Kings Co.

Certificate filed in New York Co.

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At a stated term of the Circuit Court of the United States, for the Southern District of New York, held in the Court-room in the County of New York, on the day of June, 1905. 661

Present—Hon. JOHN R. HAZEL, U. S. Judge.

VICTOR TALKING MACHINE COMPANY, *et al.*,
Complainants,

vs.

AMERICAN GRAPHOPHONE COMPANY,
Defendant.

On Berliner Patent No. 534,543. 662

The suit of the Victor Talking Machine Company, *et al.*, against the American Graphophone Company on Berliner Patent No. 534543, having come on to be heard at final hearing, and having been argued at final hearing before me on June 5 and June 6, 1905, by counsel for complainants and defendant in that suit, and at the close of the argument on June 6, 1905, Louis Hicks, solicitor 663 and counsel for the Talk-o-Phone Company and Leeds & Catlin Company, having moved the Court for permission to address the Court with reference to the contract of December 8, 1903, between the Victor Talking Machine Company and the American Graphophone Company, appearing in the record in said suit between said two Companies; on reading and filing the annexed affidavit of Louis Hicks, verified June 8th, 1905, it is:

Ordered that the said motion be, and the same hereby is denied.

U. S. Judge.

664 June 16, 1905.

Hon. John R. Hazel,
Care Hon. John A. Shields,
Clerk United States Circuit Court,
Post Office Building, New York.

Dear Sir:

I am in receipt from Louis Hicks, Esq., attorney for the defendant in the cases Victor Talking Machine Co., *et al.* vs. Leeds & Catlin Co., and Victor Talking Machine Co. *et al.* vs. the Talk-O-Phone Co., of a communication addressed to you, signed by Mr. Hicks, and
665 dated June 12, 1905, submitting to you for your signature for filing a proposed order entitled in the above entitled cases, with an affidavit of Mr. Hicks attached, containing the statement of certain alleged facts in connection with another suit, viz.: Victor Talking Machine Co., *et al.* vs. American Graphophone Co., which latter case your Honor heard on final hearing on the 5th and 6th inst.

I desire to call your Honor's attention to the fact that the cases against Leeds & Catlin Co., and against the Talk-O-Phone Co., in which this order and affidavit are entitled, have not been before your Honor, and you cannot very
666 well enter such an order, as suggested, in these cases. The proposed order submitted by Mr. Hicks, recites an application made by him to your Honor, for permission to address the Court in the case against the American Graphophone Co., which your Honor heard—the Talk-O-Phone Co. and against Leeds & Catlin Co. The motion referred to in the proposed order is entirely foreign to those last mentioned cases.

You will probably recall that the order entered on the 9th inst., at the instance of Mr. Waldo G. Morse, was entitled in Victor Talking Machine

Co. vs. American Graphophone Co., which was the case your Honor heard on final hearing. It would, therefore appear to be improper to enter this proposed order in these cases against Leeds & Catlin Co., and against the Talk-O-Phone Co., which your Honor has not had before you. 667

Regretting to annoy you again in this matter, I remain,

Yours very truly,

Horace Pettit.

June 12, 1905.

Hon. John R. Hazel, U. S. Judge,

Dear Sir: 668

My motion for leave to address the Court or to submit a memorandum with reference to the contract of December 8, 1903, appearing in the suit between the Victor Talking Machine Company and the American Graphophone Company upon Berliner patent No. 534,543, having been denied, I respectfully submit for signature and filing an order to that effect, to the end that the record of the motion may be preserved.

Very truly yours,

Louis Hicks,

Counsel for Leeds & Catlin Company, 669
and the Talk-o-Phone Company.

P. S.—Mr. Pettit suggests that the order should be entitled in the suit of Victor Talking Machine Company vs. American Graphophone Company. Judge Platt, however, in putting the suit of American Graphophone Company vs. Universal Talking Machine Company on the Jones patent over, signed an order in American Graphophone Company vs. American Record Company (Law Journal, May 24, 1905), Mr. Edmonds, who made the motion, being solicitor for American Record Company. The

670 four suits of the Victor Company against the Talk-o-Phone Company and Leeds & Catlin Company were on the calendar ready for hearing before your Honor, and the order presented should properly be made in these suits. It is immaterial in which suit the order is entered; hence, if your Honor should be of opinion that it should be made in Victor Talking Machine Company vs. American Graphophone Company, I have no objection and present the same order entitled in that suit.

AGREEMENT.

This agreement made this Eighth day of Decem-
671 ber, 1903, between the Victor Talking Machine Company, a corporation organized and existing under the Laws of the State of New Jersey (hereinafter called the "Victor Company") and the American Graphophone Company, a corporation organized and existing under the Laws of the State of West Virginia (hereinafter called the "Graphophone Company").

WITNESSETH:—

Whereas the Victor Company has received a license from the Berliner Gramophone Company, a corporation organized and existing under the Laws
672 of the State of Virginia, to manufacture, sell and deal in gramophones and gramophone goods, the subject matter of certain United States Patents issued to Emile Berliner, which said patents have never been adjudicated, so that their scope and validity are not ascertained, to wit:—

No. 372,786, issued November 8, 1887;
No. 382,790, issued May 15, 1888;
No. 534,543, issued February 19, 1895;
No. 548,623, issued October 29, 1895;
No. 564,586, issued July 28, 1896;

Whereas, the Graphophone Company is desir- 673
ous of operating under said patents, provided any claim thereof be sustained so as to control either the zig-zag sound-records, or the process or apparatus for making the same, or the machine for reproducing therefrom, and is desirous of co-operating with said Victor Company in every lawful way to procure as speedily as possible a judicial construction of said patents, or some of them, and

Whereas, the Graphophone Company is the owner of the Patent No. 688,739, granted December 10, 1901, to one Joseph W. Jones, for a method of making Zig-Zag Sound Records, and of the patent No. 714,651, granted November 25, 1902, to Thomas H. 674
Macdonald for Improvement in Recording and Reproducing Sounds, which patents have not been adjudicated, so that their scope and validity have not yet been ascertained, and

Whereas, said Victor Company is desirous of securing a license for making zig-zag records under said patents respectively, provided any claim thereof be sustained broadly, so as to control the said method of making zig-zag sound records; and sound records;

NOW, THEREFORE, in consideration of One dollar in hand paid by each party to the other, and of other valuable and sufficient considerations, re- 675
ceipt whereof is hereby acknowledged, the parties have hereby covenanted and agreed as follows:

1. The said Graphophone Company shall not delay any of the infringement suits now pending or hereafter to be brought against it, by those who own and control the said Berliner patents, but shall do all in its power to speed the said suits to final hearing and final adjudication, using all lawful means to defend the said suits, the object of this portion of the agreement being that the question of the validity of the said Berliner patents, shall be

676 fully tried as speedily as possible, so that their value may be known and determined at an early date.

2. In case, at final hearing, one or more of said patents as to any broad claim or claims thereof, be sustained by the Court, past royalties and damages shall be waived and the Graphophone Company shall thereafter during the lifetime of said patent or patents, and so long as it uses the subject matter of such sustained claim or claims thereof (unless and until such decision be reversed) pay to the Victor Company by monthly payments, royalties at the following rates. If the sustained claim
677 relates to machines, the royalty shall be
; if the sustained claim relates to sound-records, the royalty shall be the basis under which this royalty shall be estimated to be per cent. of the list prices of said machines and records.

3. In case one or more claim or claims of the said patent or patents be sustained as provided in Paragraph 2, the said Graphophone Company shall thereafter, whenever so requested in writing by the Victor Company, assist it in the prosecution of its suits brought and to be brought under the said Berliner Patents against other parties, by furnishing its own counsel at its own expense, Court costs
678 to be divided, each party paying one half, it being understood that the direction and control of said suits shall be entirely in the hands of the Victor Company.

4. The said Victor Company agrees to co-operate with the Graphophone Company in adjudicating said Jones Patent and said Macdonald Patent in the same manner as provided in Paragraphs 1 and 3 hereof, with respect to the said Berliner patents, the direction or control of any suits brought under said Jones Patent and Macdonald patents to be in the hands of said Graphophone Company.

5. In case, at final hearing, said Jones patent No. 679
688,739, or said Macdonald patent No. 714,651, be sustained as to any broad claim or claims thereof, past royalties and damages shall be waived, and the said Victor Company shall thereafter during the lifetime of the said sustained patent or patents so long as it uses the subject matter of the sustained claim or claims of either or both patents (unless and until such decision be reversed) pay to the Graphophone Company by monthly payments, royalties upon all such sound-records, sold by it, at the rate of the basis under which this royalty shall be estimated to be per cent. of the list prices of said records. 680

6. It is understood and agreed that the provision herein contained relative to the payment of royalties by the respective parties, shall become operative upon the decision of any infringement suit upon final hearing based upon any of the patents, as herein provided for, which the parties hereto hereafter agree in writing between themselves shall be considered as a test case whether such case to be agreed upon as a test case shall be between the parties hereto or against other defendants.

7. It is further agreed when any of said patent or patents shall be so adjudicated as valid, that the party owning or controlling such patent or patents, 681
will, with due diligence actively proceed against all infringers of its said patent or patents to enjoin such infringing parties from said infringements, and for an accounting when requested, in writing to proceed against any such alleged infringers by the other party hereto.

8. It is further agreed that neither party to this contract shall copy, or reproduce in any manner, any records owned or controlled, or first produced, by the other party, nor will they deal in or handle

682 in any manner whatsoever, such copies if made by others and that they will co-operate to secure a discontinuance of such acts on the part of others, and to secure legislation making it illegal to copy or counterfeit records, if it shall be found that the present laws do not cover the case.

9. In case any claim or claims, of any of the Victor Company's Patents will be sustained, as provided in Paragraph 2 of this agreement, the Graphophone Company shall thereafter furnish unto the Victor Company, monthly, on the first day of each month, during the existence of this agreement, a correct sworn statement of all said pat-
683 ented machines and records sold by it during the preceding month, and the Victor Company, in case any claims of the said patents of the Graphophone Company shall be sustained as provided in said Paragraph 2, shall thereafter furnish unto the Graphophone Company monthly during the existence of this agreement, a correct sworn statement of all such patented records sold by it during the previous month. Each party shall keep books of account of all such patented goods sold by them respectively. In the event of any disagreement between the parties as to any statement to be furnished, the matter shall be referred for settlement
684 to a firm of disinterested public auditors to be agreed upon by both parties, which firm of auditors shall be privileged to examine the books of either, or both, parties and the report of said auditors shall be final.

10. It is covenanted and agreed by and between the parties hereto that no right is hereby granted or conferred, directly or indirectly, to the Graphophone Company to use the name, or word, "Gramophone" in connection with talking machines, records or accessories, or in any

way whatsoever, and that no right is 685
hereby granted or conferred to the Victor Company to use the name, or word, "Graphophone" relative to talking machines, records or accessories, or in any way whatsover; the right to the use of the said respective words belonging to the said respective parties being expressly reserved in the respective parties, and each of the parties hereto covenant and agree that it will not use the said name, or word, belonging to the other party.

11. The rights herein provided for shall be personal to the parties to whom the same may be granted, and not assignable or any rights herein whatsoever, without the special consent in writ- 686
ing of the grantor.

IN TESTIMONY WHEREOF, the parties have executed this agreement the day and year first above written.

VICTOR TALKING MACHINE CO.,
Eldridge R. Johnson, Pres.

Attest:
Albert C. Middleton, Sec'y.
AMERICAN GRAPHOPHONE CO.,
By E. D. Easton, Pres.

Attest: 687
E. C. V. Rockwood.

Witnesses:
Charles K. Haddon.
A. C. Bowman.
Philip Mauro.
Horace Pettit.

688 **Testimony of Emile Berliner in Suit of Victor Talking Machine Co. et al. vs. American Graphophone Co. on Patent No. 534,543, being Suit No. 8627 in U. S. Circuit Court, Southern District of New York.**

Washington, D. C.

Mar. 20, 1905; 10 A. M.

And thereupon Emile Berliner, a witness produced on behalf of defendant, being duly sworn, deposes and says, in answer to questions by Mr. Mauro, as follows:—

689 Q 1. Please state your name, residence and occupation? A. Emile Berliner, Washington, D. C., inventor.

Q. 2. Are you the same Emile Berliner upon whose application the patent in suit No. 534,543 was granted to the United States Gramophone Company as assignee? A. I am.

Q. 3. In the prosecution of the application for that patent, you filed an affidavit, verified April 23, 1904, in which reference was made to an article entitled "Berliner's Gramophone" published in the "Electrical World" for Nov. 12, 1887. That
690 article, I understand, was prepared by yourself; is that correct? A. I prepared the article, and sent it to the "Electrical World" with the suggestion of publishing the subject matter thereof, and it probably followed the verbatim description of my invention, adding only so much as to show that the ideas published were my own.

Q. 4. Have you a copy of that publication? A. I have here a copy of the issue of the Electrical World of Nov. 12, 1887, containing the article.

Q. 5. Will you be kind enough to compare with the published article the extract therefrom included in your said affidavit, which appears in Defendant's Exhibit, file and contents of patent in suit, and which extract I will now read to you? Having made that comparison, will you please state whether the passage is correctly quoted in your said affidavit? A. I have compared your reading of the passage with the original publication and find it correct. 691

Q. 6. Did you, on or about May 16, 1888, read at a stated meeting of the Franklin Institute in Philadelphia, a paper on the subject of "The Gramophone; Etching the Human Voice?" A. I did. 692

Q. 7. In what hall or building was that meeting held? A. In the regular lecture hall of the Franklin Institute in Philadelphia.

Q. 8. About how many people were in the audience? A. I should say about 200.

Q. 9. Was that paper published in the procedings of the Franklin Institute for the month of June, 1888? A. It was.

Q. 10. And have you with you a copy of that publication? A. I have a copy of a reprint from the original publication. 693

Q. 11. Will you please look at Defendant's Exhibit, Berliner Franklin Institute Paper, the same being a pamphlet stating on title page that it is published by the U. S. Gramophone Co. of Washington, D. C., and s e that if that is one of the reprints of that paper? A. The copy presented to me is a reprint of that same publication.

Q. 12. Did you at that meeting etch one or more sound-records by means of the recording apparatus, such as illustrated on page 15 of that reprint,

694 as indicated under the heading "Demonstrations" on page 16 of that paper? A. I etched one record, traced by means of the recording apparatus, illustrated on page 15.

Q. 13. Did you at that meeting use in reproducing one or more phonautograms, which you had prepared previously to the meeting, the reproducing apparatus illustrated in the second cut on page 17 of said paper, and there marked "Reproducing apparatus, May, 1888?" A. I had with me at that lecture a number of records previously etched in Washington and I reproduced them with such reproducing apparatus as is illustrated on page 17 of
695 the pamphlet.

Q. 14. Will you please describe briefly the construction and operation of the mounting of that reproducing apparatus, with reference to the movement of the same across the tablet? A. The reproducing diaphragm sound-box was mounted at the end of a pivoted lever, to it attached was a rubber tube which led to a horn mounted on the violin music stand. The stylus of the reproducing sound-box was placed into the outer circle of the spiral of the record, and upon turning the table, upon which the record was mounted, the sound-box was
696 propelled freely across the record-disc by and along the volute of the record.

Q. 15. On page 18 of that publication, reference is made to Werner Suess. Is he the same Werner Suess on whose application, letters-patent No. 427,279 (Defendant's Exhibit, Suess Patent) was granted to you as assignee?

Counsel for complainants objects to the question as incompetent, irrelevant and immaterial; also to this line of examination of the witness in the foregoing questions, relative to the said Franklin Institute lecture

and publication as incompetent, irrelevant and immaterial, and notice is hereby given that motion will be made at the hearing to strike the same from the record, this objection being also noted to questions relative to the same line of examination hereafter to be asked the witness without a repetition of the objection being noted. 697

A. He is the same Werner Suess.

Q. 16. Was Mr. Suess' invention, set forth in that patent, assigned to you for foreign countries as well as for the United States, and did you procure patents therefor in certain foreign countries? A. At the time that the American patent was assigned to me, there was no agreement between Mr. Suess and myself with regard to foreign patents. 698

Q. 17. I call your attention to Defendant's Exhibit, Suess French Patent, which is dated May 6, 1890, the same date as the U. S. Patent No. 427,279. and ask you whether or not that French patent was taken out by you or for you?

Question objected to as incompetent, irrelevant and immaterial.

A. I had nothing to do directly with the taking out of either the American or this French patent. I was in Europe at the time they were applied for. Of course, I understood that Mr. Suess was to apply for an American patent, but with regard to the French patent, I have no recollection whatsoever of having suggested it to Mr. Suess; in fact I am quite sure that I did not do so. 699

Q. 18. Did you have any interest in this French patent?

Same objection.

A. Not at the time when it was taken out, although some years afterwards I believe it was

700 merged into the European interests with which I was connected.

Q. 19. Was this patent taken out with your knowledge and consent; the French patent, I mean?

Same objection.

A. As before stated, I knew nothing about it at the time it was taken out.

Q. 20. Did you pay any part of the costs of proceeding that French patent?

Same objection.

701 A. No.

Q. 21. Are you financially interested in the complainant companies, the Victor Talking Machine Co. and the U. S. Gramophone Co.? A. I am.

Q. 22. Did you instruct or advise Mr. Suess to make his application for patent through Mr. Joseph Lyons?

Same objection.

A. Mr. Suess knew that all my patents were prosecuted by Mr. Joseph Lyons, and he probably surmised that it would be my desire that his American patent be prosecuted also by Mr. Lyons.

Q. 23. At the time Mr. Suess' patent was applied
702 for, he was an employee of yours, was he not? A. He was.

Q. 24. Did your contract of employment with him provide or contemplate that talking-machine inventions which he might make while in your employ should be assigned to you? A. I do not recollect that we had any written agreement with regard to Mr. Suess' services, except that he was paid a certain salary by the week or by the month.

Q. 25. What I wanted to get at was, whether the invention described in Suess' Patent No. 427,279 became your property in consequence of his rela-

tion with you as employee, or in consequence of a special arrangement? A. There was no special arrangement, but when he suggested the movable arm, I at once told him that I, of course, desired to be the assignee of the patent. I had in my mind at all times that my employees who worked under my direction in my laboratory were under certain obligations by law to turn over to me any invention which they would make in the course of their work for me and under my directions. I generally made it a rule to give them a special compensation as an encouragement for the special interest taken by them in my work, and it was under this condition of mind that I asked Mr. Suess to take out an American patent and assign the same to me. 703 704

Q. 26. Did Mr. Suess accept this view of the obligations of his employment.

Objected to as clearly incompetent; further as irrevelant and immaterial.

A. He evidently did, as he made no objection to turning over the patent to me.

Q. 27. Mr. Suess is no longer living, is he? A. He died several years ago.

Cross-examination by Mr. Pettit:

XQ. 28. In the publication of the "Electrical World" of Nov. 12, 1887, offered in evidence by the defendant, and to which you have referred in your direct-examination, the following is stated, among other things, in describing the invention:— 705

"Another way is to mount the phonoautogram on a circular, wooden resonant box, which simply rotates without progressive motion, and to press an ivory point into the groove.

In this case the hand which holds the ivory easily follows the groove, and the point is

706 led along the volute of the record, and vibrates the sound box by undulatory shocks."

You may state whose invention this arrangement of apparatus and method was, as described by you in the part just quoted? A. It was my own invention.

XQ. 29. You may state whether Mr. Suess had anything to do with inventing this construction of apparatus and method just quoted? A. Mr. Suess was not then in my employ, and he had nothing to do with this idea.

XQ. 30. When you stated in this description, just quoted "and the point is led along the volute of the
707 record," what did you mean by the word "led?" A. I meant by the word "led" the engaging, taking hold of and propelling of the stylus by the record-groove, at the same time that it is vibrated.

XQ. 31. What function did the hand perform which held the ivory stylus, as described? A. The hand was the stylus-holder merely.

XQ. 32. What do you mean by that? A. I mean that the hand holding and lightly pressing the stylus into the record-groove, was forced to follow the latter from the pheriphery to center of the record.

XQ. 33. You then suggested in this article, and
708 described one of the mechanical devices for mounting a reproducing diaphragm and stylus, so as to permit the stylus not only to vibrate but at the same time to carry it across the revolving disc. The statement referred to immediately following the last statement quoted, reads as follows:—

> "This suggests the plan of mounting a reproducing diaphragm and stylus on a carriage moving on rails, and permitting the pointed stylus not only to vibrate but also to push the carriage across the revolving disc,

and thereby follow the volute of the sound record." 709

I ask you to look at U. S. patent No. 564,586, issued to you July 26, 1896, for Gramophones, marked Defendant's Exhibit, Berliner Patent No. 564,586, and state whether the construction of apparatus specified in the portion just quoted from the "Electrical World" is illustrated in Fig. 10 of the drawings of this patent? A. The patent quoted was applied for a few days before the publication of the quoted article in the "Electrical World," and the illustration of Fig. 10 in said patent is the same construction I had in mind when I prepared the article of the "Electrical World." 710

XQ. 34. I quote now from the specification of the Berliner patent No. 564,586, page 4, lines 110-123, and ask you whether this is a correct description of the apparatus and method illustrated in Fig. 10 of said patent:

"The diaphragm-casing 31 is secured to a small truck 55 upon rails 56 arranged vertically above and parallel with a diameter of the reproducing-disc, and at such height above the same that the stylus 29 will be in engagement with the undulatory grooves of even depth which represent the record of sounds. 711

The listener applies his ear to the earpiece, and when the shaft 6′ is rotated the stylus and diaphragm will be forced to vibrate, as in the apparatus shown in Fig. 1, but will at the same time move with the truck 55 across the face of the disc 54."

Objected to as incompetent and clearly not germane to the direct-examination. If complainant desires to have Mr. Berliner's testimony with reference to his patent No.

712 564,586 it should be taken as part of complainant's case.

A. The description quoted correctly describes the function of the apparatus described in Fig. 10.

XQ. 35. Does it also clearly describe the apparatus there illustrated? A. Yes.

XQ. 36. What moves the truck in the construction of this same Fig. 10, across the track?

Same objection.

A. The record groove, being in hard resisting material, presses against the stylus 29 which is firmly attached to the diaphragm-box 31 which again is
713 connected to truck 55, and as the record-groove is a spiral, in rotating the same the truck 55, is moved across the record disc. This is facilitated by the two wheels of the truck, which enable the latter to freely roll on the wire 56 when pressed by the record-groove acting against the point of the stylus.

It is hereby stipulated and agreed by counsel for complainant that Suess' French patent No. 205,491 appears to be the same as U. S. patent No. 534,543 and may be treated as such subject to correction.

Cross-examination closed.

714 Certificate and signature waived.

Defendant rests.

Testimony of Emile Berliner in Rebuttal in Same Suit.

715

Philadelphia, April 14, 1905.

By Mr. Pettit:

Q1. You are the Emile Berliner, who has testified in this case before, having been called as a witness by the defendant, are you not? A. I am.

Q2. You may state whether you are the inventor and patentee of the invemtion claimed in the patent in suit, No. 534543? A.. I am.

Q3. In your deposition of March 20, 1905, in this suit, you testified, amongg other things, to the construction of apparatus shown in Fig. 10 of Berliner patent No. 564586 issued to you July 28, 1896, and filed November 7, 1887, which is illustrated and described in this patent. Will you kindly produce, if you can, a model embodying the construction illustrated and described in Fig. 10, of the said Patent No. 5645886? A. I hereby produce a model which is practically a copy of a device used by me in 1887 about the time that the patent in question was filed. We did not then have a box motor machine, and the records were larger, and the mounting of the rail on which the carriage moved was on separate posts, but otherwise this is such a construction as I then made and successfully operated.

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The witness, in answering the above question, has produced the model referred to, which is offered in evidence and marked "Complainants' Exhibit, Berliner Model."

Q4. Do you know what became of the original apparatus similar to this model which you just produced? A. I do not.

Q5. Have you made any search for it? A. I made a search for it in the lasst few days, but did not

718 find any part of it. I might state that I have in my possession what I believe is part of the turntable used at that time, but I have nothing of the mechanism, the rail and carriage then used.

Q6. You may state when the device, such as claimed in claim 35 of the patent in suit, embodying the process or method claimed in claim 5, was first sold and put in public use by you, or any one, to your knowledge, in this country? A. In 1894, the United States Gramophone Company being the assignee of my gramophone patents, began the manufacturing and the sale of gramophones embodying the inven-
719 tion claimed in claims 5 and 35 of the patent in suit, and a large number of such machines were sold in the Autumn of 1894. This was the first time that talking machines were sold, in which a feed screw for the purpose of propelling the reproducing sound box across the record was dispensed with.

Q7. Had this construction of apparatus and method of using the same been in public use in this country prior to the date just mentioned by you, to your knowledge? A. No, it had not.

Q8. You may state briefly what you know about the commercial use of this invention embodied in claims 5 and 35, from the time that it was first placed upon the market by you, or by the United
720 States Gramophone Company, in 1894? A. In 1895 the United States Gramophone Company gave a sole license under the patents owned by it, to the Berliner Gramophone Company, of Philadelphia, and thereupon this latter company continued the manufacture and sale in large quantities of apparatus, such as described in the two claims mentioned, and from that time the business of selling these machines grew to large proportions, until to-day on every portion of the globe machines of this type can be found.

Q9. You may state whether prior to the time that 721
your invention involved in this suit, was placed upon the market, as stated by you, there was any other company or party manufacturing or selling, without your license on permission, a machine involving the apparatus and method of your invention? A. No, I have not parted with my rights for making and selling this invention to any other party, except to the United States Gramophone Company, who was the successor of the American Gramophone Company.

Q10. And you may state whether your invention embodied in the claims in controversy in this suit, had been in public use in this or any country for 722
more than two years prior to your application for this patent in suit, No. 534543? A. No, it had not.

Cross-examination by Mr. Mauro:

XQ11. In answering Q7, did you assume that "public use" is synonymous with "commercial use?" A. By "public use" I mean any other use but of my own and my assistants of the laboratory.

XQ12. According to your understanding, a use in public is not a public use if by yourself or one of your assistants. Is that your understanding? A. By public use I understand the use in public of an invention for profit.

XQ13. You say that the first sale of machines in 723
which a feed screw for the purpose of propelling the reproducing sound box across the record was dispensed with, occurred in 1894. Is it your understanding that the invention of the claims involved in this suit is for an apparatus or method for propelling a reproducing sound box across the record without a feed screw? A. The two claims, 5 and 35, refer to any apparatus in which the record groove both propels and vibrates the reproducing stylus or sound box, and it practically means to the exclusion of a feed screw for that purpose, or

724 of any other device outside of the record groove itself, by which the sound box or the reproducing stylus may be propelled across the record surface.

Redirect-examination by Mr. Pettit:

RDQ14. Were any of the machines claimed in claim 35 or apparatus embodying claim 5, in public use, in any sense, to your knowledge for more than two years prior to the date of your application for your patent in suit?

Objected to as incompetent.

A. No, they were not.

EMILE BERLINER.

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Deposition of the witness concluded.

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A Paper read Before the Franklin Institute, May 16, 1888, on the Gramophone, by its Inventor, Emile Berliner, Published by the U. S. Gramophone Company, Washington, D. C., Washington, Rufus H. Darby, Printer, 1894. 733

THE GRAMOPHONE: ETCHING THE HUMAN VOICE.

By Emile Berliner.

(A paper read at the Stated Meeting of the Franklin Institute, May 16, 1888.) 734

Jos. M. Wilson, President, in the chair.

The President introduced Mr. Berliner, who spoke as follows:

Members of the Franklin Institute, Ladies and Gentlemen:—The last year in the first century of the history of the United States was a remarkable one in the history of science.

There apeared about that period something in the drift of scientific discussions which, even to the mind of an observant amateur, foretold the coming of important events.

The dispute of Religion *versus* Science was once more at its height; prominent daily papers commenced to issue weekly discussions on scientific topics; series of scientific books, in attractive popular form, were eagerly bought by the cultured classes; popular lectures on scientific subjects were sure of commanding enthusiastic audiences; the great works on evolution had just commenced to take root out side of the small circle of logical minds from which they had emanated and which had fostered them; scientific periodicals were expectantly 735

736 scanned for new information, and the minds of both professionals and amateurs were on the *qui vive*.

Add to this the general excitement prevailing on acount of the forthcoming centennial celebration with its crowning event, so dear to this nation of inventors, the world's exhibition, and even those who did not at the time experience the effects of an atmosphere pregnant with scientific ozone can, in their minds, conjure up the pulsating, swaying and turbulent sea of scientific research of that period. Science evidently was in labor.

The year 1876 came, and when the jubilee was at its very height, and when this great city of Phila-
737 delphia was one surging mass of patriots filling the air with the sounds of millions of shouts, a still small voice, hardly audible, and coming from a little disc of iron fastened to the centre of a membrane, whispered into the ear of one of the judges at the exhibition, and one of the greatest of living scientists, the tidings that a new revelation had descended upon mankind, and that the swift and fiery messenger of heaven's clouds had been harnessed to that delicate, tremorous, and yet so potent form of energy, called the Human Voice.

The speaking telephone had been born.

The stimulus which this event gave to science can
738 best be measured by the enormous advance made since, especially in that new most prominent branch electricity; and I will show further on how, immediately following it, our sister Republic across the ocean answered the magic touch by the conception of another invention, the scope of which cannot today be measured yet, and which only just now is starting on its career of usefulness among the practical arts.

In order to show the influence which these two inventions had upon each other, and how their respective development came about in parallel steps,

permit me, before entering upon the new methods 739
which I am to bring before you to-night, to pass in rapid review on the principal events in the history of the transmission of speech electrically, and of recording and reproducing the same mechanically.

In 1854 Charles Bourseuil, with more than usual boldness, advanced the idea that two diaphragms, one operating an electric contact and the other under the influence of an electro-magnet, might be employed for transmitting speech over telegraphic distances. "Speak against one diaphragm," he said, "and let each vibration break or make the electric contact, and the electric pulsations thereby produced will set the other diaphragm vibrating, and 740
the latter ought then to reproduce the transmitted sound." Outside of the fallacy which his theory contained in the assumption of breaking the contact, instead of merely modifying the same, Bourseuil's paper, in speaking of the diaphragm, laid stress upon stating that "if one could be invented so movable and flexible as to answer to all the undulations of sound." He evidently desired extreme flexibility, and diaphragms constructed on that principle proved fatal to the efforts of many subsequent experimenters; even at first to Mr. Bell, who like Bourseuil, borrowed the idea from the flexible *typanum membrani* of the human ear, and who overlooked the important modifications which the 741
vibrations undergo, before reaching the auditory nerve, by the series of muscular hinges in which the various bony accessories of the ear are mounted and which act as elastic dampers against the *typanum membrani*.

Bourseuil's ideas were immediately reprinted from French journals in other countries, and among the first was a prominent German semi-weekly journal, printed in Frankfurt-on-the-Main. *The Didaskalia*, which, on September 28, 1854, under the heading "Electrical Telephony," published a

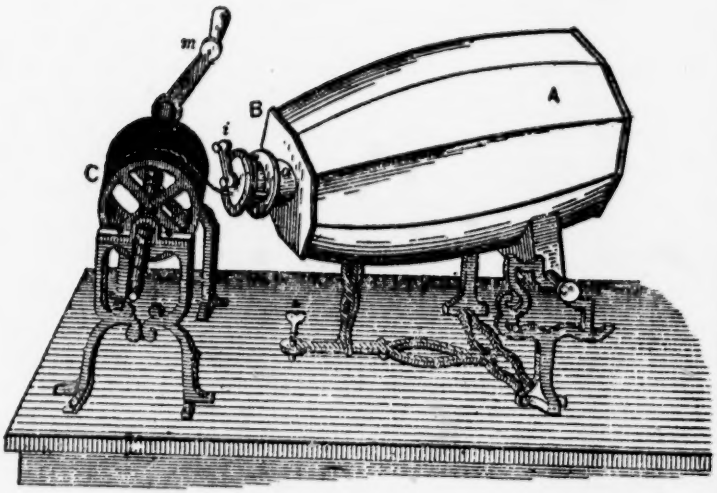
742 leading article, giving a full account of Bourseuil's ingenious and wonderful conception.

Franfurt was then a city of about 60,000 inhabitants, and among other institutes of learning, it supported a Physicial Society, which counted, at the time of this publication, among its active and most zealous members an enthusiastic young teacher named Philip Reis, who, five years afterward, actually made an apparatus such as indicated by Bourseuil (who had since died without executing his idea), and which apparatus has since become known as the Reis telephone.

I will not now enter upon any controversy as to
743 the scope of this invention, regarding the possibility, at the present day, to transmit speech with the same. It may suffice to state that, when the news of the Bell telephone reached the learned men of Germany, some of the very first scientists in Berlin, who knew all about the Reis apparatus, doubted the possibility of the performance as represented by the American press. It is also now a matter of history that in the late decision in favor of Mr. Bell the United States Supreme Court was unanimous so far as the Bourseuil-Reis apparatus was concerned.

744

FIG. 1.



Scott's Phonautograph.—1857.

While Bourseuil's conception was being digested by Reis, another invention, having also a membrane diaphragm as its motive principle, was patented in France in 1857. This was the phonautograph, by Léon Scott, which had for its purpose the recording of sound vibrations upon a cylinder rotated by hand and moved forward by a screw (Fig. 1). The cylinder was covered with paper, this was smoked over a flame, and a stylus attached to the center of a diaphragm, under the influence of words spoken into a large barrel-like mouthpiece, would trace sound vibrations upon the smoky surface. Scott also employed an animal membrane for his diaphragm, and took pains, by means of an attachment called a subdivider, to make the vibrations appear as large as possible. This subdivider,

748 however, became the prototype of the dampers in subsequent apparatus, like the Blake transmitter and the Edison phonograph.

The next important event in electro-phonic and acoustic science was the publication by Helmholtz of his investigations in sound, and of Konig in the same line of research; but, classical as these publications will forever remain, they for a time retarded the progress of apparatus for practical use, for the reason that they discouraged inventors by the mechanical complications which they apparently ascribed as indipsensable to articulate speech. In fact, the perusal of their work left a serious doubt
749 in the mind of many a student whether there was not something in articulate speech, and its audibility by the human ear, beyond the grasp of the mechanical mind of man.

These doubts were still increased by the attempts of Faber to construct a talking machine after the system of the human organs of speech, a mass of intricate mechanism—levers, bellows and pulleys—which gave an unearthly rendition of many words and sentences.

But the Bell telephone came, and its greatness consisted not so much in the fact that it carried speech over hundreds of miles, but that it taught how simple a piece of apparatus could produce such
750 perfect results, and that any diaphragm, however thick, could be made to set up audible articulate vibrations.

The effect of this lesson was immediate, for hardly had the new wonder become known when an astonishing chain of logic formed in the brain of a distant devotee to science.

On the 30th day of April, 1877, Mr. Charles Cros deposited with the Secretary of the Academy of

Sciences in Paris, a sealed envelope, containing 751
what in translation reads as follows:

"Process of Recording and of Reproducing Audible Phenomena."

"In general, my process consists in obtaining the tracing of the to-and-fro movements of a vibrating membrane, and the utilization of this tracing for reproducing the same to-and-fro movements, with their relative inherent durations and intensities in the same membrane, or in another adapted for furnishing the sounds and noises which result from this series of movements.

"We are, therefore, concerned with the transfor- 752
mation of an extremely delicate tracing, such as that obtained with a delicate stylus rubbing upon a surface blackened by a flame, to transform, I say, these tracings in relief or intaglio, in resisting material capable of guiding a moving body, which transmits these movements to the sonorous membrane.

"A light stylus is connected with the center of a vibrating membrane; it terminates in a point (metallic wire, the barb of a feather, etc.,) which bears upon a surface blackened by a flame. This surface is a part of a disk to which is given a double movement of rotation and rectilinear progression.

"If the membrane is at rest, the point will trace 753
a simple spiral; if the membrane vibrates, the traced spiral will be undulating, and these undulations represent exactly all the to-and-fro movements of the membrane, with their times and intensities."

Up to this point the apparatus as described would represent a modified Scott phonautograph, in which the cylinder is substituted by a flat disk. Mr. Cros then continues:

"By means of the photograhic process which, in

754 fact, is well known, this traced, transparent, undulatory spiral is converted into a line of similar dimensions, in intaglio or in relief in resisting material like tempered steel, for instance.

"This done, this resisting surface is, by means of a motor apparatus, made to turn and to progress rectilinearly with a velocity like that which was used in the registration.

"If the reproduced tracing is in intaglio, a metallic point (and if it is in relief, a notched finger), held by a spring, bears upon the tracing at one end and is connected at the other end with the center of the membrane adapted for sound reproduction. Under these conditions, this membrane
755 is not any more acted upon by the vibrating air, but by the tracing controlling the pointed stylus by pulsations exactly like those to which the membrane was subjected in recording, both as to duration and intensity.

"The spiral trace represents the successive equal periods by its increasing and decreasing length. There is nothing inconvenient in this if only the outer portion of the rotating circle is used, and if the spirals are close together, except that the central part of the disc is lost.

"In all cases, however, a helical tracing upon a cylinder is much to be preferred, and I am actually
756 engaged in finding a practical embodiment of this."

This paper was only read in open session at the Academy on December 3, 1877, and in the meantime Mr. T. A. Edison appeared with the phonograph.

From what we can learn by published reports. Mr. Edison, some time in the latter part of September, in the same year, was at work on an automatic telephone, by which he intended to impress a telephone message upon a strip of tinfoil and let the indentations thereby produced act upon a variable resistance, such as a lamp-black button, and

thereby transmit the message over the wire. While 757
one day at work on this, so the report runs, he perchance, slipped the previously indented slip under the recording stylus which, as in the Scott phonautograph, was connected to the center of a diaphragm, and then and there occurred the first actual reproduction by mechanical means of words registered before.

The phonograph became then, at once, an accomplished fact, for to such an experienced inventor it mush have taken but a moment to mentally cover the cylinder of a Scott phonautograph with tinfoil and to indent the same at right angles to the surface of the cylinder. 758

Everybody remembers the sensation which the invention produced, and the prognostications which were advanced for it by the scientific press showed that the principle of the apparatus was at that time considered to contain the grm of an ultimate achievement of more accurate results.

In this respect, as well as in others, there are striking resemblances in the history of the two inventions with which I am dealing.

In both, the original idea emanated from Frenchmen, and both described one process of transmitting, and a different process of reproducing speech. In the Bourseuil telephone there was a contact transmitter and an electro-magnet receiver; in the 759
Cros phonograph, a written record and an engraved reproducing groove.

In both inventions the first realization occurred in the United States, and was effected with apparatus representing only the reproducer of the original conception. In the speaking telephone, the reproducing electro-magnet of Bourseuil became also the transmitter of Bell, and in the phonograph the reproducing grooves, and stylus of Cros became also the record of Edison. Both the Bell and Edi-

760 son apparatus were accepted for a time as containing the best mechanical and philosophical principle for the highest attainable results. In both, the aim at the beginning was to produce loud sounds, and both eventually contented themselves with a much fainter voice, which then became more distinct in articulation. Finally, in both inventions, the original transmitter was subsequently resurrected and found to contain a pointer toward a superior principle as a transmitter and recorder, and it only remains now to use a Scott phonautographic record direct for reproduction in order to complete a parallel with the fact that a contact transmitter
761 can also be used as a telephonic reproducer.

In making these parallels, however, I am aware of the fact that Cros had a better conception of a talking machine than Bourseuil had of a speaking telephone.

The paper of Mr. Cros, which can be found on page 1082, Vol. 85, of the *Comptes Rendus* of 1877, appears to have been consigned immediately to obscurity. When, ten years later, I filed my patent application for the gramophone, not even the examiners at the Patent Office knew anything of Mr. Cros, and when I mentioned his name in the first publication of the "gramophone," even those best informed on the subject were surprised. Nevertheless, I considered it a duty to my friends to make
762 the following statement to the editors of *The Electrical World*, which they published simultaneously with the "gramophone," on November 12, 1887. I said:

"On August 30 of this year, which was three months after the filing of my application for a patent, while in the office of my counsel, Mr. Joseph Lyons, I happened to look through a German scientific book in his possession, and, reading up about the phonograph, I came across a remark stating

that on April 30, 1877, one Chas. Cros deposited at 763
the French Academy of Science a sealed paper, which, when opened and read at a subsequent session during that year, was found to contain a description of the author's idea that a photo-engraved phonautographic record, either in relief or intaglio, might be utilized for reacting through a stylus on a diaphragm, and by this reaction ought to reproduce the original sound."

"Surprised as I was at this discovery, I requested Mr. Lyons to find out through his frieds in Paris whether and to what extent Mr. Cros had ever carried his idea into practice, and an answer has since come to the effect that Mr. Cros never put his idea 764
into practical operation.

"Whether he was taken aback by the *eclat* which the phonograph produced soon afterward; whether he became discouraged at the practical difficulties, of which I have found many at the outset of all my experiments, or whether he did not appreciate the peculiar advantage of the phonautogramic method—all this does not appear from the meager accounts so far to hand.

"But although, viewed in the light of equity, he had virtually abandoned his invention at the time when I independently and without knowledge of his prior idea took up the same subject, the fact 765
remains that to *Mr. Charles Cros belongs the honor of having first suggested the idea of and feasible plan for mechanically reproducing speech once uttered.*"

As this statement has never been challenged since it was first made, I presume that it is substantially correct.

If we should attempt to carry out strictly the ideas of Mr. Cros we would find many obstacles to obtaining practical results, and while undoubtedly the correctness of the general principle could be

766 proved, the effects would not be as good even as those obtained by the original phonograph. Even with the application of the various improvements which I originally introduced, the process requires great care; and while this would not have been an obstacle, on account of the great advances made in photo-engraving, I have now abandoned the original process altogether, and have substituted one of great rapidity and simplicity.

But, to return to the phonograph, we find this apparatus remained in an unsatisfactory and unfinished condition for nearly nine years.

Among those who believed that ultimately it
767 could be turned to practical account was the well-known original patron of the speaking telephone, Mr. Gardiner G. Hubbard; and, being also financially interested in it, he, in 1883, or thereabouts, caused the Volta Laboratory Co., an association originally founded by Prof. Bell as a laboratory, from the funds of the Volta Prize awarded to him by the French Government, to provide ample funds for the purpose of making an extensive series of experiments with the phonograph.

Prominent among the scientists connected with the enterprise were Prof. Bell, Dr. Chichester A. Bell, and Mr. C. S. Tainter. After two years of ardent labors these gentlemen came to the conclu-
768 sions:

First. That the indenting process had to be abandoned and an engraving process be substituted, *i. e.*, instead of pushing the record surface down with the stylus, as in the original phonograph, it should rather be dug out or graven into.

Second. That the best substance, answering also the various other requirements, was beeswax hardened by an admixture of paraffine or other similar waxy substances.

Third. That loud speaking was impracticable, and 769
that the ordinary conversational tone gave better results, although reducing the reproduction to the loudness merely of a good telephone message.

In Patent No. 341214 of May 4, 1886, issued to Dr. Chichester A. Bell and Mr. C. S. Tainter, the following claims, among others, were granted:

"The method of forming a record of sounds by impressing sonorous vibrations upon a stylus, and thereby *cutting* in a solid body the record corresponding in form to the sound waves in contradistinction to the formation of sound records by indenting a foil with a vibratory style, etc.

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"3. The vibratory *cutting* style of a sound-recorder, substantially as described.

"7. A sound record consisting of a tablet, or other solid body, having its surface *cut or engraved* with narrow lines of irregular and varied form corresponding to sound waves, substantially as described.

"9. The method of forming a sound or speech record, which consists in engraving or cutting the same in *wax* or a *wax-like composition*, substantially as described."

As a final result of all their labors, there issued 771
in the Spring of 1887 the graphophone, the first really practical apparatus of the phonograph type, and which was exhibited to admiring crowds in Washington and elsewhere.

The record ground of this machine is a thin pasteboard cyclinder covered with wax.

Soon after the graphophone became generally known, Mr. Edison, evidently encouraged by the results obtained in this instrument, took again to experimenting with the phonograph, and, after trying wax covered with tin-foil for indentation, he abandoned that mode of recording, and also set-

772 tled upon a cylinder of wax and the graving out process, thus confirming the correctness of Bell and Tainter's conclusions, and the new Edison phonograph and the graphophone appear to be practically the same apparatus, differing only in form and motive power.

I now come to the subject of the evening, the Gramophone.

In my telephonic studies I had become familiar with all the causes influencing the transmission and reproduction of the voice, and what had at all times struck me as forcibly as anything in telephonic phenomena was the fact that the self-induction of
773 long iron wires or of polarized electro-magnets acted so detrimentally upon the articulation. Electrical resistance alone would simply have weakened the sound, but self-induction meant retardation, and this distortion of the transmitted waves which varied in length and amplitude. To appreciate fully what an extremely small amount of energy ordinary speech possesses mechanically let us consider a few well-known facts:

A puff of air, not strong enough to extinguish a candle-flame, when blown across an empty bottle or into a whistle will produce a sound which may be heard over a hundred feet away. The amount of electricity needed to operate audibly a magneto-
774 telephone is said to be less than one-millionth part of the electricity of a standard Daniel cell.

In considering such, and other facts, it became evident to me that if such delicate energy, subdivided into maybe several hundred waves, should indent or engrave itself into a solid body, it needed but very slight mechanical resistance to modify considerably the character of the sound vibrations: for what self-induction is to the telephone circuit the variable resistance which impressible material offers to indentation or engraving at various depths is to the phonograph record sheet. Neither

is proportional in direct ratio to the expended energy and must give cause, aside from a reduction in size of the sound characters, also to a distortion of the same. 775

Your o' n Prof. Houston, in his learned remarks in the Journal of the Franklin Institute of January, 1888, says:

"The difficulties just pointed out, it would seem, must exist in any instrument, however improved in its mechanical structure, if it makes the record on the Phonogram at right angles to the surface thereof. Of course, if a substance were discovered for such a surface that offered a resistance to indentation exactly proportional to the depth of such indentation the difficulty would, to a great extent, be removed." 776

All the experiments which were made with the phonograph and the graphophone confirmed the correctness of all these assertions; for the louder it was necessary to speak when recording, the less distinct became the articulation of the reproduced sound.

A change for the better was, therefore, to be obtained.

First. By tracing the vibrations, as in the old phonautograph, parallel to the record sheet. 777

Second. By reducing the resistance offered by the record medium to as near to nothing as possible.

Both principles, although not emphasized, are contained in the Cros document; but, for my part, I found that merely smoked surfaces were utterly impracticable, because if sufficiently black for a photo-engraving and with the extremely small sizes of waves obtained with records that are adaptable for the reproduction of good articulate speech, the record lines were ragged and, under a magnifying glass, looked like a set of parallel saws whose teeth

778 would form a grating sound which nearly drowned the articulation.

I observed, however, in my experiments that the grayish deposit of lamp-black, which is obtained from the center of a kerosene flame, was more oily and gave a somewhat sharper line than the deep black deposit caused by smoking with the top of the flame, and this led me to the highly beneficial process of oiling the plate prior to smoking the same, either by applying printers' ink or artists' paint by means of a printers' roller or by brushing oil over it. The smoke would then amalgamate with the oil and form a *fatty ink* of a rather dry
779 consistency, which, when crossed by a stylus, shows, even under a microscope, a sharply cut transparent line.

I still employ this process for small test-plates, and prepare them as follows: One part of paraffine oil is mixed with twenty parts of benzine or gasoline. This mixture is poured on and off a glass disk, when the benzine evaporates, leaving an extremely thin layer of oil. This is held over a smokey flame and moved to and fro until the surface looks just dry. The application of artists' paint with a roller prior to smoking is still better.

I also adopted for the gramophone a disk of glass as a support for the smoke deposit, traced the
780 sound record from below so that the displaced lamp-black should fall down, varnished it after the tracing was done, and used this disk as a negative without, therefore, needing a camera or photographic chemicals outside of the chrome-gelatine or chrome-albumen used in developing a raised picture. I would refer for a detailed account to the already mentioned issues of The Electrical World and the Journal of the Franklin Institute.

The lesson of simplicity which the telephone was continuously preaching caused me at an early day to look for a simpler plan to attain my purpose,

and in the specification originally filed by me I said: 781

"This record (meaning the phonautogram) may then be engraved either mechanically, *chemically* or photo-*chemically*." And, although for a long time without much hope for success, the purely chemical process of direct etching haunted me continuously, and was repeatedly suggested by others.

But it was easier suggested than carried out, because under the principles of the gramophone the etching ground was to offer practically no resistance to the stylus, and to make one which had no resistance mechanically, but did resist the etching fluid after the tracing was done, was the problem 782 to be solved.

You will readily see that if we can cover, for instance, a polished metal plate with a delicate etching ground, trace in this a phonautogram, and then immerse the plate in an etching fluid, the lines will be eaten in, and the result will be a groove of even depth, such as is required for reproduction. Such a process, of course, would be much more direct and quicker than the photo-engraving method.

In nature provision seems to be made for all the wants of mankind; and, confident in this belief, I kept on trying to find a trail which would lead to promising results, and I have the honor to-night, 783 for the first time, to bring before you this latest achievement in the art of producing permanent sound records from which a reproduction can be obtained, if necessary, within fifteen or twenty minutes, and which can be accurately multiplied in any number by the electrotype process. It may be termed, in short, *the art of etching the human voice*.

The etching ground which I use is also a fatty ink, and one of the best I have found thus far is made by digesting pure yellow beeswax in cold gasoline or benzine.

784 Benzine in a cold state will not dissolve all the elements of the wax, *but only a small part*—namely, that which combines with the yellow coloring principle—and the resultant and decanted extract is a clear solution of a golden hue, which gradually becomes bleached by exposure to light. The proportions which I use are one ounce of finely scraped wax to one pint of gasoline. The bottle containing the mixture must be repeatedly shaken, and, after the white residue has settled, the clear fluid is decanted or drawn off by a siphon.

I then take a polished metal plate—generally zinc—and flow the fluid on and off, as if I would coat with collodion. The benzine will quickly evap-
785 orate, and there remains a very thin layer of wax, iridescent under reflected light, not solid as a coating produced by immersion in a melted mass, but spongy or porous, and extremely sensitive to the lightest touch.

Partly on account of the too great sensitiveness of a single film, and also as an additional protection against the action of the acids employed in the subsequent etching, I may apply a second coating of the solution, and this double coat I find to answer all requirements.

The protection which this porous or spongy wax affords from the acid is mostly due to the fact that
786 watery solutions assume the spherical state on the film, while at the lines where the wax is distributed the acid enters freely and attacks the metal below.

A difficulty which only a short time ago appeared insurmountable, was the accumulation at the point of the stylus while tracing the sound record of filamentary particles of dust which exist in the wax solution, and which, being ever present in ordinary rooms, settle down and adhere to the film. These dust particules are so fine that they cannot, as a rule, be detected by the most searching inspection of the prepared plate; but they become very con-

spicuous and a very serious source of annoyance 787
when a long record is being made.

It must be borne in mind that the contact which the tracing stylus makes with the record surface is obtained by the elastic pressure from a piece of hair-spring backed by a narrow blade of writing-paper, and which pressure amounts to about five grains. Therefore, as this stylus passes through the fatty ink or other ground and traces the fine undulatory line, the dust particles, as well as small portions of the displaced ink or wax, adhere to and accumulate at the point of the stylus and are dragged along, and the record thereby becomes blurred and indistinct. 788

I have discovered an effective means for overcoming this difficulty, and it consists in applying to the record surface a fluid that slightly adheres to the etching ground and keeps it wet while the record is being made. I have found commercial alcohol to be very effective for this purpose, and it is used by pouring it over the plate just before the sound record is made. The alcohol, of course, immediately commences to evaporate, but not rapidly enough to disappear entirely before the record is finished, and there is no difficulty in adding more alcohol while the plate revolves. Under this condition the point of the stylus remains perfectly clean, and it seems as if the dust particles had not 789
been present at all.

The theory by which I explain this result, is that the alcohol, so to speak, lubricates both the surface and the stylus and prevents the adhesion of the filaments to the latter. At any rate, the application is highly beneficial, and the resulting line is so sharp and fine that it has to be widened in the subsequent etching process in order to permit the acid to bite at sufficient depth. It can also be proved that the resistance of the wax film is de-

790 creased by the presence of the alcohol; but when this has evaporated the wax film appears to be in precisely the same condition as before, even showing again the iridescent colors which disappeared on the application of the alcohol.

The film of wax being so thin it is almost transparent, and if the record were made on this it could barely be detected. As, however, it is sometimes desirable to examine the record prior to etching the same, I can smoke the etching ground slightly by holding it high above burning camphor, so as to prevent a heating and melting of the spongy wax, and the alcohol poured afterward over this smoked
791 surface does not seem to wash off any of the soot particles.

We now come to the important process of etching the record. Etching is done on steel, copper or brass with nitric acid, perchloride of iron, or with a mixture of muriatic acid and chlorate of potash, known as Dutch mordant. In modern photo-engraving nearly all the etching is done on zinc by means of diluted nitric acid, and these materials are preferred on account of their being cheaper than any other, and zinc is a metal easily obtained with smooth and even facings. In etching, however, on zinc it is necessary continually to brush away the hydrogen bubbles which
792 form and adhere to the lines, and as the etching ground is usually of firm and solid material (like asphaltum, hard wax, pitch, or rosin mixtures), no harm results from the brushing necessary in order to obtain sharp edges along the lines.

Desiring to avail myself of the advantages offered in zinc plates, I soon found that no etching fluid was known that would be to zinc what perchloride of iron was to copper, namely, etch cleanly and without the appearance of hydrogen bubbles. To apply the brushing to the delicate spongy wax film I employed was out of the question, as the first touch would wipe away the whole ground, and to

permit the formation of hydrogen bubbles without 793
brushing them away meant uneven and ragged lines and a distorted record.

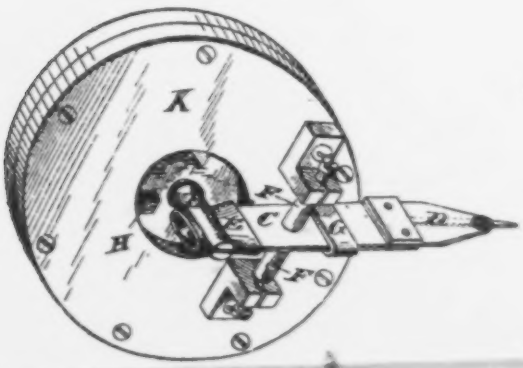
While studying this matter over it occurred to me to, so to speak, depolarize the zinc plate by adding to the acid bichromate of soda, which I thought might prove efficient, as it does in the galvanic battery, to prevent the appearance of the bubbles while etching the zinc. It took, however, a comparatively large quantity of the bichromate to answer my purpose—so much that I concluded that the mixture had all the conditions of a chromic acid, or at least of a mixture of chromic acid and nitrate of soda. When I thereupon substituted a solution of 794
chromic acid, pure and simple, I found this to be a most excellent etching fluid, and that is what I am now using—namely, a solution of one part by weight of dry chromic acid dissolved in three parts by weight of water. I use the commercial acid, such as can be obtained from Churchman & Co., of this city, at twenty-five cents a pound. Such a solution etches on zinc a sharp and clearly cut line and no hydrogen appears during the etching.

The back of the zinc plate had previously been painted with protecting varnish or molten beeswax and within from fifteen to twenty minutes from the time of immersion in the chromic acid solution, and 795
without disturbing it, a cleanly cut groove of sufficient depth is obtained for reproduction. This groove may then be deepened in the ordinary way of rebiting by covering the facing of the plate with rosin dust, heating the same, and then immersing in diluted nitric acid. Under these conditions the brush may be applied until the necessary depth is obtained, generally in about one to three minutes, according to the strength of the etching fluid. I have used stronger solutions of chromic fluid. I have used stronger solutions of chromic acid with no ill effects and a more rapid etching and there seems to be

a wide margin on this point, provided the plate is watched during the etching process. The lines very gradually widen when in the course of the etching, but the upper edges of the groove remain perfectly parallel and sharply defined.

Before proceeding with a practical demonstration of the whole process I will now describe the most important apparatus of the gramophone—the recorder. The translation of the movements of the diaphragm into the same movements at right angles, and with the extreme smallness of the motion and the liability of distorting them, adding to them, or detracting from their value in translating them, requires greater care to guard against error than an uninitiated observer would suppose, and when we examine the complex and extremely delicate mechanism which nature has provided in the human ear for giving a correct translation of air vibrations into nervous vibrations it behooves us to be careful in the application of everyday mechanics. Free as the telephone is, comparatively, from me-

FIG. 2.



chanical incumbrances, it is deficient in articulation of the consonants, and with the simplicity of mounting, as acquired in the phonograph and graphophone, these difficulties of recording proper do not exist, and are shifted to the other portions of their construction and manipulation.

In having attempted, therefore, to do justice to all sources of error, I am not yet prepared to say that my present recording apparatus is constructed and adjusted to the greatest attainable correctness. Those who are familiar with the tediousness of original research will admit that a new subject of this kind cannot be solved in its entirety within the space of a few months, and what I bring before you to-night, being the hasty results of a new machine finished but ten days ago, should be measured rather by the possibilities it opens than by the results so far attained, whatever merit you may accord to them.

My impression, however, is that there is very little of lost or added motion in my present apparatus and whatever imperfections may exist must be looked for in the mode of reproducing the sound rather than in the recorder (Fig. 2).

K is the diaphragm-box; A is the center portion of the diaphragm; B is a brass post screwed to the diaphragm and slotted above; E is a piece of rubber tubing held in the slot and holding one end of the stylus C. This stylus is made of stiff metal and is pivoted by the steel pivots FF. D is a blade of writing paper reinforced by a piece of hair spring, which extends and forms the tracing point. G is a piece of rubber around the stylus, which dampens its musical vibrations. H is a piece of felt damper between the diaphragm and the diaphragm-box, which acts as a general damping device.

802 The whole is mounted on a sliding carriage, which is drawn by clockwork across the disk, while the latter revolves at the rate of about thirty revolutions per minute.

DEMONSTRATIONS.

While the plate is being etched, I will now let you listen to some phonautograms which I prepared in Washington within the last two weeks. The reproducing apparatus or sounder is constructed on precisely the same principles as the recorder, but of smaller dimensions and more rigid mountings—so rigid, in fact, that if it were used as a recorder it would barely show undulations on a
803 smoked surface when shouting into it.

The stylus is tipped with iridium like points of a gold pen, the object of this being to prevent abrasion by the continuous friction with the hard record.

In reproducing the sound I find that it is louder with hard contact substances, like metal, than with soft ones, like rubber or plaster of Paris. Hard metals, like copper, nickel or brass, sound louder than zinc or type metal, but the scraping sound, which is due to friction, is also increased unless the record surface is smooth and very highly polished.

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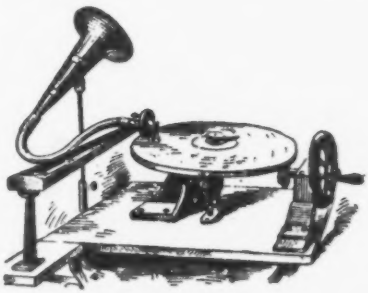
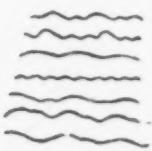
Recording Diaphragm and Stylus.—May, 1888.



Reproducing Apparatus.—May, 1888.



Record lines (magnified 6 diameters).

808 But when an iridium pointed stylus is rubbed over clean glass, a scraping sound is barely susceptible. I am now in communication with a firm that is making ornamental glass tiles by impressing upon red-hot glass plates fancy designs in relief or intaglio by strong pressure. You will readily see that if on the same plan we can impress a matrix showing the sound record in raised lines upon a glass plate, we would get a groove in glass giving a loud reproduction with a minimum of disturbing sound due to friction.

In the description of Nov. 12, 1887, I advanced the idea of mounting the sounder on a carriage and rails, and have the record-groove itself be the screw
809 which was to guide the point of the stylus across the disk from periphery to center. This has been improved upon by Mr. Werner Suess, the gentleman here with me to-night, and who is the mechanician of our little shop in Washington. He suggested to mount the sounder on a pivot at some distance from the disk and then let the reproducing groove guide the sounder across the disc over an arc of flat amplitude. This happy idea is embodied in the present apparatus, and is a very ingenious adaptation indeed.

PRACTICAL APPLICATIONS.

810 A standard reproducing apparatus, simple in construction and easily manipulated, will, at a moderate selling price, be placed on the market.

Those having one may then buy an assortment of phonautograms to be increased occassionally, comprising recitations, songs, chorus and instrumental solos or orchestral pieces of every variety.

In each city there will at least one office having a gramophone recorder with all the necessary outfits. There will be an acoustic cabinet, or acousticon, containing a very large funnel or other sound-concentrator, the narrow end of which

ends in a tube leading to the recording 811
diaphragm. At the wide opening of the funnel will be placed a piano, and back of it a semi-circular wall for reflecting the sound into the funnel. Persons desirous of having their voice 'taken' will step before the funnel, and, upon a given signal, sing or speak, or they may perform upon an instrument. While they are waiting the plate will be developed, and when it is satisfactory, it is turned over to the electrotyper or the moulder in charge, who will make as many copies as desired.

There is another process which may be employed. Supposing that the Holy Father should desire to 812
send broadcast a pontifical blessing to his millions of believers, he may speak into the recorder, and the plate then, after the words are etched, is turned over to a plate-printer, who may within a few hours print thousands of phonautograms on translucent tracing paper. These printed phonautograms are then sent to the principal cities of the world, and upon arrival they are photo-engraved by simply using them at photograph positives. The resultant engraved plate is then copied *ad infinitum* by electrotyping or moulding, and sold to those having standard reproducers.

Prominent singers, speakers or performers may 813
derive an income from royalties on the sale of their phonautograms, and valuable plates may be printed and registered to protect against unauthorized publication.

Collections of phonautograms may become very valuable and whole evenings will be spent at home going through a long list of interesting performances. Who will deny the beneficial influence which civilization will experience when the voices of dear relatives and friends long departed, and utterances of the great men and women who lived

814 centuries before, the radiant songs of Patti, Campanini, and others, the dramatic voices of Booth, Irving and Bernhardt, and the humor of Nye and Riley can be heard and reheard in every well-furnished parlor.

Last wills can be registered with the testators' own voices, and important testimony can be sent from afar and read in Court, and the voice so produced can be testified to by friends present.

Languages can be taught by having a good elocutionist speak classical recitations, and sell copies of his voice to students. In this department alone, and that of teaching elocution generally, an im-
815 mense field is to be filled by the gramophone.

Addresses—congratulatory, political or otherwise—can be delivered by proxy so loudly that the audience will be almost as if conscious of the speaker's presence.

A singer unable to appear at a concert may send her voice and be represented as per programme, and conventions will listen to distant sympathizers, be they thousands of miles away.

Future generations will be able to condense within the space of twenty minutes a tone picture of a single lifetime. Five minutes of a child's prattle, five of the boy's exultations, five of the man's reflections, and five from the feeble utter-
816 ances from the death-bed. Will it not be like holding communion even with immortality?

POSTSCRIPT.—One of the peculiarites inherent with the gramophone is the possibility to enlarge the original sound by enlarging the printed vibratory characters of speech and then photo-engrave the same. In this manner it should be possible to get the reproduction at a much greater volume than the original sound. It would be interesting if some day speakers in a large hall would prefer to do their

talking by machine, or to send speeches to a convention which they were unable to attend in person. 817

E. B.

(At the close of the paper and after the exhibition of the apparatus, Prof. E. J. Houston moved a vote of thanks to M. Berliner for his interesting and valuable communication. The motion was carried unanimously, and the meeting was adjourned.)

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Specification, Including Description and Claims on Application for Letters-Patent of the United States Covering the Mechanical Feed Device of the Talk-O-Phone.

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My invention relates to certain improvements in talking machines employing a disk record, and it has for its main object to provide positive mechanical means for propelling the reproducer carrying arm across the face of the record at a rate corresponding to the record grooves.

A further object is to provide means whereby the reproducer is rigidly locked against lateral movement in a direction outward from the center of the record so long as the stylus of the reproducer is in contact with the record; and also to provide means whereby it becomes necessary to raise the stylus out of contact with the record when the reproducer is moved across the face of the record.

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A further object consists in providing a simple and easily operated adjustment whereby the movement of this reproducer arm may be regulated and varied to adapt my invention for the use of the various makes of records.

In the ordinary forms of disk talking machines the reproducer carrying arm is capable of free lateral movement across the face of the record while the stylus of the reproducer is in contact with the record groove. This condition oftimes results in irreparable damage to the record, since the operator, through ignorance or carelessness, will sometimes force to move the stylus across the record grooves and thereby break down the walls of said grooves. Where my invention is employed it is imperative that the stylus be lifted from contact with the face of the record before the return movement of the reproducer arm can be accomplished.

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826 Of the various makes of disk records on the market, the American and Columbia are molded with approximately 100 undulatory grooves to the inch, the Victor and Zonophone with approximately 98 to the inch, and the Favorite and Leeds records with approximately 84 to the inch, so that it is apparent that if the reproducer arm and reproducer were propelled at an invariable rate of movement, the machine would be adapted for the use of one make of record only, or such records as have the same number of grooves to the inch. In my invention I provide means for varying the movement of the reproducer arm at will, the necessary adjust-
827 ment to adapt the machine for any make of record being readily accomplished.

In carrying out my invention, I employ the novel combination, arrangement and the details of construction hereinafter shown, described and particularly pointed out in the claims.

In the accompanying drawings Figure 1 is a plan view of a disk talking machine embodying my invention; Figure 2 is a side elevation of the same; and Figure 3 is enlarged elevation, partly in section, showing the means for imparting movement to the swinging reproducer arm.

Referring to the drawings, 1 is the casing of a talking machine adapted to contain a spring motor
828 of any ordinary or preferred construction, 2 being the vertical spindle of said motor extending through the top of the casing and adapted to carry the turn-table 2. Four indicates the swinging reproducer arm pivoted at one end at 5 upon a bracket 6 and having free vertical and lateral movement upon its pivot. At the outer end of the reproducer arm is mounted the reproducer 7 carrying the usual stylus 8 adapted to move across the face of the record and engage the record grooves; 9 is a bevel gear firmly secured upon the vertical spindle

2, and said gear meshes with a bevel gear 10 se- 829
cured upon a horizontally rotatable spindle 11 provided with a screw thread or worm 12 which engages a worm gear 13. Rotating with and fixed upon the worm gear 13 is a pinion 14 meshing with a gear 15 carrying a swinging arm 16, disposed below the swinging reproducer arm and swinging in a direction opposite thereto. The arrangement of the gearing is such that when the motor of the talking machine is operated and the turn-table spindle rotated at the usual speed, the rotation of the gear 15 and the arm 16 is so slow as to be nearly imperceptible. Arm 16 is of tubular construction, as plainly shown in Figure 3, and the same is provided 830
with an elongated slot to permit free movement along the same of a stem 18 extending downwardly from the reproducer arm. Stem 18 terminates at its lower in and enlargement at its lower end having the form of a ball nicely fitting the interior of the tubular arm 16. By this construction the stem 18 is permitted to slide along the tubular arm 16 with a minimum of friction, and the connection of the reproducer arm with the arm 16 is effected. Stem 18 is secured at its upper end to a block 19 adjustable mounted upon the reproducer arm at a point approximately midway between the ends of said arm, 831
said block being capable of adjustment away from or toward the pivot of said arm, a set screw 20 securing the block in any of its adjusted positions. Carried by the block 19 is a pointer 21 moving along a plate 22 secured upon the reproducer arm, and upon said plate are indicated, preferably by initial letters, the various makes of records, as plainly shown in Figure 2, there being vertical grooves beside the letters on the plate to locate the exact position to which the pointer is to be moved. The inner end of tubular arm 16 is pivoted to a

832 spring-pressed link 23, the same have a free vertical movement upon its pivot, as indicated in dotted lines "a" Figure 2, and being therefore free to vibrate in unison with the reproducer arm to adapt itself to unevenness in the record surface. Link 23 is in turn pivoted to a sleeve 24, loosely mounted to permit free movement upon a stud 25 which also supports the gear 15. Link 23 is provided with a downwardly projecting tooth 26 adapted to engage the teeth 27 of an annular ratchet 28 an upper face of the gear 15, being normally forced into engagement with said ratchet by a spring 29. Between the joined ends of the tubular arm 16 and
833 the link 23 is an angular space 29, so that, when the reproducer arm is raised to lift the reproducer from the record, the arm 10 will initially take the position in dotted lines "b," Figure 3. During this operation, the link 23 is still in engagement with the ratchet 28, the reproducer arm being consequently locked against lateral movement. When the arm 16 has attained the position "b," the angular space between the ends of the arm and the link will be closed, the ends being in close contact. Further lifting of the reproducer arm will raise the arm 16 above the position "b" and cause the link 23 to be disengaged from the ratchet 28, and said link being pivoted to the sleeve 24 which has a free
834 rotary movement upon the stud 25, the reproducer arm may be freely moved upon its pivot.

In the operation of my invention, we will assume that an American record is to be reproduced upon the machine. The block carrying the stem 18 is adjusted upon the reproducer arm to the position shown in Figure 2 and secured in said position, the exact point being indicated by the letter A upon the plate secured upon the arm. After starting the motor which propels the turn-table, the reproducer arm is raised and the stylus of the reproducer placed in the record groove. The operation of the

motor will actuate the tubular arm 16, causing the same to swing slowly in the arc "5," Figure 1, and positively propel the reproducer arm across the face of the record at a rate corresponding to the record grooves. By adjusting the block carrying the stem 18, to vary the distance of said block from the pivot of the reproducer arm, the rate of the movement of the reproducer arm may be made to correspond to the pitch of the grooves in the various makes of records. When the reproduction is completed, the reproducer is removed from contact with the record face by lifting the reproducer arm, and since, as, hereinbefore described, said arm must be raised to a considerable height above the record face before it can be returned to its original position, the possibility of damaging the record grooves is eliminated. 835 836

It will thus be seen that I provide means for locking the reproducer arm against the manual movement in a lateral direction while the stylus is in contact with the record, and that damage to the record is thereby insured against; and that I provide positive mechanical means for propelling the stylus carried by the reproducer across the face of the record in accordance with the record grooves; and further that I provide means whereby the rate of the movement of the reproducer arm may be varied to correspond to the pitch of the grooves in the particular record employed upon the machines. 837

Having described my invention, what I claim and desire to secure Letters Patent is—

1. In a talking-machine, a swinging reproducer arm, and a rotative non-supporting part connected with said arm to impart swinging movement thereto.

2. In a talking machine, a rotatable record disk a swinging reproducer arm, and a rotative non-sup-

838 porting part, connected with said arm to impart swinging movement thereto in accordance with the record grooves.

3. In a talking-machine, a rotatable record disk, a swinging reproducer arm, a rotative non-supporting part connected with said arm to impart swinging movement thereto in accordance with the record grooves, and means for varying the movement of said arm.

4. In a talking-machine, a rotatable record disk, a swinging reproducer arm, a rotatable non-supporting part connected with said arm to impart
839 swinging movement thereto in accordance with the record grooves, and adjustable means carried by said arm to vary its movement.

5. In a talking-machine, a swinging reproducer arm, a second arm mounted to swing below the reproducer arm and having operative connection therewith, and means for actuating said second arm.

6. In a talking-machine, a swinging reproducer arm, a second arm mounted below said reproducer arm and having a sliding connection therewith, and means for actuating said second arm.

840 7. In a talking-machine, a swinging reproducer arm, a second arm connected with the reproducer arm and mounted to swing below the same in a direction opposite thereto, and means for actuating said second arm.

8. In a talking-machine, a swinging reproducer arm, a slotted tubular arm mounted to swing below said reproducer arm a connection carried by said reproducer arm engaging the tubular arm through the slot therein, and motor-driven means for actuating said tubular arm to impart swinging movement to the reproducer arm.

9. In a talking-machine, a swinging reproducer arm, a tubular arm mounted to swing below said reproducer arm, said tubular arm having an elongated slot, a connection between the reproducer arm and the tubular arm comprising a stem extending through the slot in the tubular arm and having a ball-shaped end to traverse the interior of the tubular arm, and motor-driven means for actuating said tubular arm. 841

10. In a talking-machine, a swinging reproducer arm, a slotted tubular arm mounted to swing below said reproducer arm, motor-driven means for actuating said tubular arm, an adjustible block carried by said reproducer arm, means for securing said block in adjusted position, and a connection betwen said block and said tubular arm comprising a stem carried by said block and extending through the slot in the tubular arm and having a ball-shaped end to traverse the interior of said tubular arm. 842

11. In a talking-machine, a rotatable record disk, motor-driven means for imparting rotation to said disk, a swinging reproducer arm adapted to be impelled across the face of the record, and a rotative non-supporting part actuated by said motor-driven means and adapted to engage said reproducer and impart swinging movement thereto. 843

12. In a talking-machine, a rotable record disk, motor-driven means for imparting rotation to said disk, a swinging reproducer arm carrying a reproducer adapted to be impelled across the face of the record, a second arm mounted to swing below the reproducer arm and operatively engaging the same, and gearing connecting said second arm with the aforesaid motor-driven means.

13. In a talking-machine, the combination with the rotatable motor-driven record-supporting spindle, of a swinging reproducer arm, a second arm

844 mounted to swing below the reproducer arm, and connected therewith to impart swinging movement thereto, and gearing connecting said second arm with the aforesaid record supporting spindle.

14. In a talking-machine, a swinging reproducer arm mounted so as to be free to vibrate in a vertical direction, a motor-driven rotative arm mounted below said reproducer arm and also free to vibrate in a vertical direction, and a connection between said arms.

15. In a talking-machine, a swinging reproducer arm mounted so as to be free to vibrate in a
845 vertical direction, a motor-driven rotative arm mounted below the reproducer arm and also free to vibrate, and a downwardly extending stem carried by said reproducer arm having a sliding connection with said motor-driven arm.

16. In a talking-machine, a reproducer arm mounted to permit the same to be lifted manually, a motor-driven rotative part mounted below said arm, a swinging arm operatively connected with said reproducer arm and pivoted upon said rotative part, and means actuated by the lifting of the reproducer arm for disengaging said last named arm from said rotative part to permit free swing-
846 ing movement of the reproducer arm when the same is lifted.

17. In a talking-machine, a rotatable motor-driven record disk, a reproducer located above the record disk, a stylus carried by the reproducer adapted to contact with the face of the record disk, a supporting arm for the reproducer mounted to permit the reproducer to be impelled laterally across the face of the record, a rotative part actuated by the motor-driven means for the record, an arm carried by and rotative with said rotative part and having operative connection with said repro-

ducer arm, and an interengaging connection be- 847
tween said rotative part and the arm carried thereby, whereby the reproducer is held against manual movement in a lateral direction while the stylus is in contact with the record face.

CIRCUIT COURT OF THE UNITED STATES,

SOUTHERN DISTRICT OF NEW YORK.

VICTOR TALKING MACHINE COMPANY, *et al.*

vs. 848

TALK-O-PHONE COMPANY.

VICTOR TALKING MACHINE COMPANY, *et al.*

vs.

LEEDS & CATLIN COMPANY.

State and County of New York, ss.: 849

Albert L. Irish, being duly sworn, says: I am President and Treasuerer of the Talk-o-Phone Company and have been connected with that Company since the time of its organization. I have read the annexed affidavit of Harry Ensign, Superintendent of the Talk-o-Phone Company, and the statements therein made by said Ensign are to the best of my knowledge, information and belief correct and true. The Talk-o-Phone Company has never been engaged in the manufacture of sound records of any kind, and has manufactured only

850 talking machines without sound records. The Talk-o-Phone Company has from time to time bought and sold disc sound records and has put upon such disc sound records at times the label of the Talk-o-Phone Company, and the Talk-o-Phone Company has also bought and sold disc sound records having the label of the manufacturer or other label thereon.

I am acquainted with the course of business of the Leeds & Catlin Company, and I know that the Leeds & Catlin Company has never manufactured talking machines, but has manufactured sound records. Furthermore, the Leeds & Catlin Company has not been engaged in the purchase and
851 sale of talking machines, but the Leeds & Catlin Company took from the Talk-o-Phone Company a certain number of talking machines in settlement of an account. Other than talking machines so taken by the Leeds & Catlin Company from the Talk-o-Phone Company, the Leeds & Catlin Company has not purchased talking machines from the Talk-o-Phone Company, and I am informed and believe, and my knowledge and observation confirms the statement that the Leeds & Catlin Company has not purchased and sold other disc talking machines.

The Victor Talking Machine Company and its counsel have been sending to the trade letters such
852 as that dated March 6, 1906, by the Victor Talking Machine Company to the trade, and such as that dated March 7, 1906, by Horace Pettit to Messrs. J. P. Crotty & Company. The sending of such letters to the trade has caused irreparable damage to the Talk-o-Phone Company, causing a loss of tens of thousands of dollars to the Talk-o-Phone Company. I, therefore, instructed counsel for the Talk-o-Phone Company, Louis Hicks, to compel the Victor Talking Machine Company immediately to make its motion for preliminary injunction.

I have read the moving affidavits of Messrs.

Kennedy, Fagan and Middleton upon these two 853
motions for preliminary injunction in the above entitled suits. The statements contained in said affidavits that both in complainants' and defendants' machines and records, the machine is only capable of use in connection with a record of this description, and the record is only capable of use in connection with a machine of this description is incorrect and untrue. The records referred to are capable of use with machines of different description, for instance with the Talk-o-Phones, provided with feed mechanism and with talking machines manufactured according to the patents prior to the patent in suit, which talking machines have been 854
on the market for many years. Such sound records existed before the date of the invention of the patent in suit, as appears from defendants exhibits herein, and have continuously been used with machines of different types. In the affidavit of Mr. Kennedy, it is said that the main distinction of the invention of the patent in suit from the prior art is in the manner of propelling the stylus across the record without the aid or independently of any auxilary feed screw or other mechanism. Moreover, the talking machines referred to in the said affidavits may be used not only with disc sound records of the description set forth in the said affidavits, but may also be used with disc 855
sound records having vertical instead of lateral undulations, and with disc sound records of different types. In fact, there is no basis whatever for the statements referred to in the said affidavits mentioned. The sound records are capable of use and have been used with machines of various descriptions and existed before the invention of the patent in suit, and the machines are capable of use and have been used with records of various description, such fact being clearly apparent from the Edison early English Patent No. 1644, of 1878, as well as

856 from the early Bell & Tainter Patents. The record is no essential part of the machine and the machine is no essential part of the record. Each is and has been manufactured independently and each is and has been sold for export to countries foreign to the United States without the other, so that under no possible circumstances has there been within the United States in such instances a combination of the record and the machine or of the machine and the record. The export business of the Talk-o-Phone Company of Talk-o-Phones without records and the export business of the Leeds & Catlin Company of records without machines is large.

857 In addition to the Talk-o-Phone marked Exhibit A, which is manufactured by the Talk-o-Phone Company, as fully explained in the affidavit of Mr. Ensign, the Talk-o-Phone Company is making another type of talking machine, such as Exhibit B, herewith presented to the Court for inspection, upon which an application for a patent is also pending on behalf of the Talk-o-Phone Company. Talk-o-Phones, such as Exhibits A and B, and similar machines constructed along the lines of Edison's English Patent No. 1644 of 1878 and other patents prior to the date of invention of the patent in suit clearly do not and cannot infringe the patent in

858 suit. Obviously records made and sold for use on such machines are similar in all respects to records made and sold for use before complainants' machines were known or on the market and such records were made and used long prior to the invention of the patent in suit, as the early prior patents to Berliner and others show.

I have for several years past been actually engaged in the manufacture and sale of talking machines and am familiar with the construction and operation thereof and with the market therefor. The American Graphophone Company under

license from complainant, has sold without re- 859
striction as to the records to be used thereon in the United States tens of thousands of machines similar to complainants' machines and so has complainant. There are, therefore, in use within the United States tens of thousands of talking machines licensed by complainant for the reproduction of sound from suitable records, which records, as above stated were an article of commerce before the invention of the patent in suit. Judge Hazel states in his opinion that "*the broad claims in suit in my judgment cannot be restricted to a record of even depth, such as described in the specification.*" This means that the claims cover machines in com- 860
bination with records having *vertical* undulations of *uneven* depth which as defendants' exhibits of prior patents show are and were, before the date of invention of the patent in suit, made as *disc* and as *cylinder* records. Complainants' affiants, in their moving affidavits, omit this statement of Judge Hazel from the parts quoted by them from his opinion and do not refer to it, but, in spite of it and contrary to it, erroneously and untruly say that machines such as complainants' machines are adapted for use only with records such as those exhibited. There are several machines made and on the market in the United States, provided with swinging arms carrying a stylus free to be vibrated 861
and propelled by the grooves of vertical cylindrical records without any auxiliary mechanism or feed screw device. Mr. Leeds, in his second affidavit, explains this fully. It is, therefore, as reasonable to say that all vertically undulating records are made solely for use on machines coming under the claims of the patent in suit (5 and 35) as to contend that all records of even depth are made for such use.

No Talk-o-Phone ever manufactured, sold or used by the Talk-o-Phone Company was provided

862 with a recorder or reproducer such as those illustrated in Figures 4, 5, 6 and 7 of the patent in suit.

I agree with Messrs. Ensign, Leeds and Moeller that the apparatus shown in Figure 10 of Patent No. 564586 is impractical. No such device was ever put upon the market, so far as my information goes, and such a device could not be used for the successful reproduction of sound from a record.

The Talk-o-Phone Company has been advised by its counsel, Louis Hicks, that the patent in suit expired before the organization of the Talk-o-Phone Company by reason of the expiration of
863 prior foreign patents to Berliner for the same invention under Section 4887 of the Revised Statutes of the United States and relying upon that fact and law among other things the Talk-o-Phone Company has invested hundreds of thousands of dollars in its plant, factory and business and has not felt obliged to confine its manufacture of talking machines to those with mechanical feed devices such as Exhibits A and B, which the Talk-o-Phone Company has been making and largely advertising for sale since October, 1905. I annex hereto a copy of such an advertisement which appeared in The Music Trade Review for Dec. 2, 1905. Similar advertisements, showing the Talk-o-Phone with the
864 feed device have within the past six months appeared in more than twelve leading magazines and in newspapers throughout the United States, including the Pittsburgh Post, Pittsburgh Dispatch, Chicago Tribune, Chicago Record and Herald, Chicago Inter-Ocean, Cincinnati Enquirer, Philadelphia Record, Minneapolis Tribune, etc. For these advertisements the Talk-o-Phone Company has expended between $22,000 and $23,000 and has also expended large sums of money equipping its factory and plant for the manufacture of such

machines and has received large orders for such 865
machines which it is now in a position to fill.

The R. Wurlitzer Co. of Cincinnati and Chicago, Lyon & Healey of Chicago, Minnesota Phonograph Co. of St. Paul, Hayes Music Co. of Toledo, J. C. Crone of Cincinnati, Theo. F. Bentel Co. of Pittsburgh, Clark, Wise & Co. of San Francisco, and others have placed large orders with the Talk-o-Phone Company for machines such as Talk-o-Phones Exhibits A and B. The Theo. F. Bentel Co. writes as follows with reference to the Talk-o-Phone with mechanical feed mechanism:

The Theo. F. Bentel Co. Inc.

866

Everything in Talking Machines, Records and Supplies. Wholesale Distributors Edison Phonographs, American Talking Machines, Victor Talking Machines, Hawthorne & Sheble Laboratory Products, Edison's Laboratory Products, Kinetoscopes and Films, Etc.

Pittsburgh's Largest Talking Machine House.
632-634 Liberty Street.

Pittsburgh, Pa., March 5, 1906.

Mr. A. L. Irish,
President, The Talk-O-Phone Co.,
Toledo, Ohio.

867

My Dear Sir:

In compliance with your request for an expression from me as to the practicability of your new mechanical feed device, as applied to disc talking machines, I am pleased to say:

I have examined same carefully and from my nine years' experience in the handling of talking machines, from a manufacturing as well as a jobbing and retail standpoint, regard it as not only a practical but also an attachment that will fill a

868 long felt want and should appeal to all users of disc talking machines, as it must necessarily contribute very largely toward the removal of the only great objection to needle feed disc talking machines, namely, the scratch, together with the further fact that by the elimination of this objection, it also means the increased life of a disc record from 200 to 300 per cent.

From the quantity of your machines that we are using and in view of the above, you can readily see how glad we would be to see the adoption of this device at the earliest possible moment.

Wishing you continued success, I beg to remain,

Yours very truly,

869

Theo. F. Bentel.

A. L. IRISH.

Subscribed and sworn to before me this 5th day of April, 1906.

(NOTARY'S SEAL)

T. P. Dalton,
Notary Public,
Kings Co.

Certificate filed in New York Co.

870

A Wonderful Record Saver

A Marvelous Sound Reproducer is the New Taper Arm TALK-O-PHONE Equipped with the Ingenious Mechanical Feed

APPRECIATING that the grating, grinding noises of all disc reproducing machines are obnoxious, we have been experimenting for the past year to perfect a **Talk-o-Phone** that would be entirely free from all foreign sounds and only reproduce the pure musical tones.

We found that the dragging of the needle in order to propel the reproducer across the record was the cause of all the trouble. To obviate this we invented the **Mechanical Feed,** a disc to propel the reproducer across the record, entirely independent of the needle.

The marvelous, clear reproductions resulting from this new device must be heard to be appreciated. This, too, is a great record saver for there is no chance to scratch the needle across the record.

It will be observed that the **new Talk-o-Phone** operated on this principle gets entirely away from the old fundamental principle of reproducing machines, namely, the needle feed. Our patents on this new device are very broad, and this arrangement cannot be used on another machine. We do not operate under any shop rights or license from anyone.

Dealers selling reproducing machines should write immediately for our full descriptive matter and for prices on the **new Talk-o-Phone.** If you are interested in supplying your customers with the only machine which brings out from disc records the pure musical tone only, you must have a sample of this **new Talk-o-phone.**

874 CIRCUIT COURT OF THE UNITED STATES,

SOUTHERN DISTRICT OF NEW YORK.

VICTOR TALKING MACHINE COMPANY, *et al.*,

vs.

TALK-O-PHONE COMPANY.

VICTOR TALKING MACHINE COMPANY, *et al.*,

875

vs.

LEEDS & CATLIN COMPANY.

State and County of New York, ss.

Edward F. Leeds, being duly sworn, says:

I have made another affidavit herein. I have read the moving affidavits upon these motions for injunction and the annexed affidavit of A. L. Irish of the Talk-o-Phone Company, whose statements therein are true to the best of my knowledge, in-
876 formation and belief. As stated in my foregoing affidavit, the Leeds & Catlin Company has never manufactured talking machines and has not been engaged in the purchase and sale of talking machines made by others except that the Leeds & Catlin Company in the settlement of an account with the Talk-o-Phone Company took a number of Talk-o-Phones in part payment. The business of the Leeds & Catlin Company is now and always has been the manufacture and sale of disc and cylinder sound records.

I have been in the talking machine business from its infancy. Disc sound records having lateral as well as vertical undulations were known and used before November 7, 1887, as appears from defendants' exhibits of prior foreign and United States patents. Before the date of the invention of the patent in suit disc sound records having lateral undulations were, therefore, known and used. The early patents for such records have long since expired. 877

The contention of the moving affidavit that disc sound records having lateral undulations can be used only on machines made according to Claim 5 and 35 of the patent in suit is untrue. Such sound records were used on other machines before any machine was made according to the alleged invention of the patent in suit set forth in claims 5 and 35. Berliner himself so states in his early foreign and United States patents and publications in evidence. Moreover, English patent No. 1644 of 1878 to Edison and the early Bell and Tainter patents show machines which can be used to reproduce sound records having lateral undulations. The Talk-o-Phones, Exhibits A and B, are such machines, which are constructed according to the feed mechanism of the early prior patents and not according to alleged invention of claims 5 and 35 of the patent in suit. 878 879

The contention of the moving affidavits that machines made according to Claims 5 and 35 can be used only with disc sound records having lateral undulations is likewise untrue. English Patent to Edison, No. 1644 of 1878, shows the contrary in figures 1 and 2. Judge Hazel, in his opinion, said that "the broad claims in suit in my judgment cannot be restricted to a record of even depth, such as described in the specification." Records of even depth are those having only lateral undulations. Hence, according to Judge Hazel and according to

880 the fact machines made according to Suess' invention, which is embodied in claims 5 and 35 of the patent in suit can be used with sound records having vertical undulations. I have myself operated such a machine for the reproduction of cylindrical sound records having vertical undulations. The machine had a swinging arm carrying a stylus at the free end which was vibrated and propelled across the surface of the record by the groove of the record, which, as above stated, was a record with vertical undulations on a cylinder. I saw half a dozen such machines in operation at 81 Franklin Street, New York City, on January 19, 1906, with
881 my counsel, Mr. Hicks. The machines were exhibited to me by a Mr. Nye, who wished to arrange with my company for the manufacture of cylindrical phonograph records for use therewith, the records to have vertical undulations similar to the ones then and there used with perfect success. I am informed and believe that the Jacob Music Company of 39 Union Square, New York, has a similar machine for use with similar records. It would, therefore, be as reasonable to say that all cylindrical or disc records having vertical undulations are designed for use only as the Suess machines embodied in claims 5 and 35 of the patent in suit. The fact is that sound records of every de-
882 scription antedate the invention of the patent in suit and were known and used on various machines prior to the invention of the patent in suit.

The Leeds & Catlin Company has purchased and used machines made by the complainant, Victor Company, and uses the same to-day. The Leeds & Catlin Company manufactures and sells for export and exports hundreds of thousands of disc sound records having lateral undulations and does not sell in connection therewith machines of any kind. The records of the Leeds & Catlin Company are

sold on the market without reference to the style 883
or character of machine with which they may afterwards be used and said records are adapted as above shown to be used with machines of different styles and are exported for use in foreign countries.

On November 2, 1905, at the Imperial Hotel in New York City, I saw the Talk-o-Phone such as Exhibit A, with a mechanical feed device in successful and perfect operation with records of different makes and I know that such machines have been extensively advertised for sale by the Talk-o-Phone Company.

In the United States, Berliner Patents in evidence, No. 372786 of November 8, 1887, and No. 884
382790 of May 15, 1888, have expired with the expiration of their seventeen year terms; and No. 564586 of July 28, 1896, has expired with the expiration of the terms of the prior English Patent No. 15232 of November 8, 1887, French Patent No. 186827 of November 8, 1887, German Patent No. 45948 of November 8, 1887. Furthermore the following Berliner foreign patents all prior to the patent in suit, have expired, viz.: English Patent 7294 of May 15, 1888; French Patents No. 193632 of May 15, 1888, and No. 207090 of July 19, 1890; German Patents of addition No. 47099 of May 16, 1888, and No. 53622 of November 20, 1889. All these expired Berliner patents describe and claim sound 885
records of even depth with lateral undulations and machines for making the same and reproducing sound therefrom. The claim made in the moving affidavits that the patent in suit can cover such sound record because of their possible use with the machines thereof is to my mind untenable. But as fully shown the patent in suit has also expired and the invention of claims 5 and 35 thereof belonged to Suess by his Canadian patent obtained on Berliner application, unless limited to the spe-

886 cial form of reproducer shown in figures 6 and 7, which has never been made, used or sold by the Talk-o-Phone Company or the Leeds & Catlin Company.

Relying upon this state of the art shown by the foregoing expired Berliner patents and by the expiration of all fundamental patents in the art, the Leeds & Catlin Company has invested and secured to be invested nearly a million of dollars in cash in its factory and plant for the manufacture of sound records of all kinds.

E. F. LEEDS.

Subscribed and sworn to before me
887 this 5th day of April, 1906.

T. P. Dalton,
[NOTARY'S SEAL.] Notary Public,
Kings County.

Certificate filed in New York County.

888

UNITED STATES CIRCUIT COURT, 889

SOUTHERN DISTRICT OF NEW YORK.

VICTOR TALKING MACHINE COMPANY vs. THE TALK-O-PHONE COMPANY.	In Equity.
VICTOR TALKING MACHINE COMPANY vs. LEEDS & CATLIN COMPANY.	In Equity. 890

State of New York, }
County of New York, } ss.:

Harry T. Goss, being duly sworn, deposes and says as follows:

I am thirty-three years of age, reside at Rutherford, New Jersey, and am by occupation a mechanical engineer and expert, having an office at No. 76 William Street, Borough of Manhattan, City of New York. I graduated from the Worcester Polytechnic Institute of Worcester, Mass., in 1894, and immediately thereafter entered upon the business of mechanical engineering and designing, in which business I have been constantly engaged down to the present time, and in which I have had occasion to give much attention to letters patent for inventions. I have had considerable experience in the art of recording and reproducing speech and other sounds, and in addition have been called upon to testify as an expert in cases growing out of infringement of letters patent. 891

892 My attention has been called to the recent suit of Victor Talking Machine Company vs. American Graphophone Company on Berliner Patent No. 534543, and, in that connection, to the Bell & Tainter Patent No. 341214, and Edison British Patent No. 1644 of 1878. What I have to say concerning these two patents will appear in this affidavit for the first time so far as I am aware, the same not being even suggested in the suit here referred to.

The leading difference, commented upon in the suit against the American Graphophone Company, between the feed of the Bell & Tainter graphphone
893 and that of the Berliner Patent grows out of the fact that in the former, although the sound-box is guided and propelled by the record-groove, this guiding and propelling does not extend over the entire surface of the record, that end of the reproducer arm distant from the sound-box being also moved by a mechanical feed. In the Berliner Patent, the sound-box is guided and propelled throughout its entire traverse by the record-groove. Apparently, therefore, the Court regarded the Berliner Patent as covering a structure in which the entire movement of the sound-box was due to the record-groove, but this I am satisfied from my examination of the structure of the Bell & Tainter
894 Patent was clearly understood by Messrs. Bell & Tainter, and in this I am confirmed by the deposition of one of the co-inventors, Chichester A. Bell, given in the suit brought in this Court, entitled "American Graphophone Company vs. National Gramophone Company," the deposition having been given on October 22d, 1900 (copy annexed, marked "Schedule A"), and by a paper deposited by Messrs. Alexander Graham Bell, Sumner Tainter and Chichester A. Bell in the Smithsonian Institute in October 1881, as appears by a copy thereof forming part of the record in the suit of American Grapho-

phone Company vs. American Record Company, 895
which case, brought in this Court, is now on appeal to the Circuit Court of Appeals for this Circuit.

In the paper so deposited and which has become known as the "Volta Laboratory Description," the inventors of the graphophone set forth the underlying features of that invention, showing such invention to include recording by means of either "a wavy or zigzag line of uniform depth" or "a straight groove of varying depth," and in this connection the following statement is made:

> "For some months previous to the present date (September, 1881) our invention has been practically perfected, but we still with- 896
> hold publication in the hope that our continued efforts may result in a more simple form of apparatus adapted for popular use."

To my mind this can mean nothing more than that the inventors were in search of a mechanism which was not only "simple" in the respect of having few parts, but also compact. From the form which the earliest graphophone took, as well as the several forms which have appeared from time to time during the exploitation of that machine, it is entirely apparent that the controlling thought was to get the machine within as small compass as possible. Had the sound-box of the graphophone 897
been fed the entire length of the record by means of the record-groove, this would have necessitated a long reproducer-arm pivoted at its distant end and the space consumed by the entire machine would practically have been doubled. The shorter arm provided with a mechanical feed for the distant end thereof was, and is, in my belief, the mechanical equivalant of Berliner's longer arm pivoted at its distant end, the former rather than the latter being adopted solely for compactness and in the effort

898 to produce the "simple form of apparatus adapted for popular use."

This conclusion, although to my mind an obvious one, is not merely matter of opinion or surmise. On the contrary, I find in the deposition of Dr. Bell ("Schedule A," annexed) evidence bearing directly upon the point (see Questions 8 *et seq*). He shows that during the work done by Mr. Tainter and himself "the groove cut in the wax was made to carry the reproducing style across the record," and that

> "I found that while that arrangement worked very well with a long lever it was not
899 quite satisfactory when the lever was made as short as I wished to make it to keep the size of the instrument within reasonable limits, and therefore some feed mechanism was added to the instrument so as to make the reproducer roughly (?) follow the motion of the record."

It is entirely clear to me that in view of the disclosure of the Edison British patent above referred to both of these methods of mounting the sound-box of a talking machine were open to Bell & Tainter at the date of the application for Patent No. 341214. Said Edison patent, in several of its fig-
900 gures and in the description concerning the same, discloses the use of a sound-box mounted upon a pivoted arm, but conected with this arm was another having a connection with a guide-groove. Examples of this construction are best shown in Figures 1, 2, 6 to 8 and 11. The sound-box (called by Edison the "phonet") included a stylus, and the record (called by Edison the "phonogram") is shown and described as being formed in tablets of various shape, including a "disc" and a "cylinder." The record-groove (see the foot of page 2 of specifi-

cation) was either straight or "zig-zag." In this 901
patent Edison describes and illustrates not only the feature of guiding the sound-box by means of a groove independent of the record-groove, but also the feature of guiding the sound-box by means of the sound-record groove itself. Probably the best illustration of this latter feature will be found in Figure 34, and in order to make this clear to the Court I have caused to be prepared a model which is presented herewith, marked "Exhibit Model Edison British Patent." Here the record-groove is formed in a disc the undulations or "indentations," as Edison called them, being spirally formed on both sides of such disc, and there being two sound- 902
boxes, one for each side, and suitably mounted so that after one has traversed the full length of the record-groove the other is brought automatically into engagement with the record-groove on the opposite side. Referring to this construction, the specification (p. 8) says:

> "Fig. 34 is a perspective view showing a double phonet, there being a spiral line of indentations on each side of the revolving disc *d*, one phonet coming into action as the other finishes; in this case the spirals should be in opposite directions, so that the disc continuing to revolve in the same direction 903
> *moves one phonet from the center outwards*, and then the other phonet is connected and moved back toward the center; this may be used as a toy."

In this construction, each of the sound-boxes is mounted upon a long arm, and these arms are pivoted at their distant ends to a block upon a rock-shaft. There is no mechanical feed whatever; in fact, absolutely nothing for guiding and propelling the sound-box save the record-groove itself.

904 The structure disclosed is precisely that of the Berliner patent, save that, instead of having a single sound-box and long pivoted arm, there are two such sound-boxes and arms and means for automatically bringing these alternately into engagement with the record-grooves on both faces of the disc.

The "Exhibit Model" herewith produced is a true and faithful reproduction of the structure illustrated in Figure 34 of the Edison patent. For compactness the rock-shaft on which the sound-box-carrying arms are mounted is made somewhat shorter, and in addition, for convenience of operation, a small crank has been put upon the end of the
905 shaft carrying the record disc. These are, of course, wholly immaterial on the question of disclosing the actual construction of the Edison device, as well as on the question of identity of the structure of his patent and that upon which the Claims 5 and 35 of the Berliner patent are based.

Claims 5 and 35 of Berliner Patent No. 534543 read as directly and certainly upon the Edison construction as they do upon that actually disclosed in the Berliner specification and drawing. Claim 35 covers the combination of "a traveling tablet having a sound-record" and "a reproducing stylus shaped for engagement with said record and free to
906 be vibrated and propelled by the same." The most casual glance at the Edison device will at once indicate the truth of the statement above made, these two instrumentalities being present in said device just as they are in the device of Berliner. The tablet has a "sound-record formed thereon" and the reproducing stylus is "shaped for engagement with said record and free to be vibrated and propelled by the same." There is, in fact, nothing else designed to vibrate or propel the reproducing stylus, or capable of vibrating or propelling that stylus, than the "sound-record"

formed in the "travelling tablet." This being true, 907
it necessarily follows that the method specified in Berliner's Claim 5 is practised in the operation of the Edison device, there being, in fact, no operation of that device save that which is specified in said claim and in which the sound-record vibrates the stylus and propels "the same along the record by and in accordance with the said record."

In so far as the Edison device is designed to employ a record tablet having a record-groove on both sides thereof, this constitutes a departure—a most immaterial one—from the mechanism disclosed by the Berliner Patent, wherein the record tablet has a record on one side only. For a number of 908
years past, however, the use of "double-cut" records has been very common, the same tablet bearing a record of one selection on one side and another record of another selection on the other. In reproducing these records in the modern machines, the sound-box is made to engage the record on one side of the tablet, and then when that reproduction has been finished the tablet is turned and the record on the other side brought into engagement with the sound-box. Edison's apparatus went farther than this, making it possible to double the length of the reproduction by providing means whereby, as the reproduction from one record was finished, another sound-box was automatically brought into engagement 909
with another record, such records being however, as is common to-day, on opposite sides of the same tablet.

HARRY T. GOSS.

Subscribed and sworn to before me, }
this 5th day of April, 1906. }

I. McIntosh,
[SEAL.] Notary Public,
N. Y. & Westchester Cos.

910 **Schedule A.**

IN THE CIRCUIT COURT OF THE UNITED STATES,

FOR THE SOUTHERN DISTRICT OF NEW YORK.

AMERICAN GRAPHOPHONE COMPANY vs. 911 NATIONAL GRAMOPHONE COMPANY and Frank Seaman.	In Equity No.

Testimony in reply for complainant taken pursuant to annexed notice before Reeve Lewis, a notary public in and for the District of Columbia, at the office of Philip Mauro, Esq., No. 620 F. Street, Washington, D. C., under and in accordance with Sections 863,864 and 865 of the Revised Statutes of the United States in such case made and provided, beginning at 10:30 A. M., October 22nd, 1900.

Present—PHILIP MAURO, Esq., for Complainant.
912 GUSTAV BISSING, Esq., for Defendant.

And thereupon Dr. Chichester A. Bell a witness produced on behalf of Complainant, being first duly sworn, deposes and says in answer to interrogatories propounded by Mr. Mauro, as follows:

Q1. Please state your name, age, residence and occupation?

A. Chichester A. Bell; of lawful age; residence, Richmond, Surrey, England; occupation physicist.

Q. Are you the C. A. Bell named as one of the

grantees of U. S. Letters Patent No. 341,214 913
granted May 4th, 1886, for Recording and Reproducing speech and other sounds?

A. I am.

Q3. Please state where and when the inventions described and claimed in that patent were made?

A. They were made in the Volta Laboratory in Washington between 1881 and 1885.

Q4. Do you mean that the work extended over the period mentioned in your last answer, or merely that the inventions were made between those dates?

A. The work extended pretty well over the whole period.

Q5. Please state who composed the Volta Laboratory Association and for what purpose it was organized? 914

A. Alexander Graham Bell, Sumner Tainter and myself; and it was organized for the purpose of making inventions. After its organization we decided to confine our work mainly to improvements in recording and reproducing sound.

Q6. The specification of your Patent No. 341,214, after describing the reproducer mounted on a universal joint, states that such reproducer so mounted is specially adapted for use in connection with a record in the form of a groove with sloping walls, and the form of record particularly described in said patent is one of varying depth; 915
please state whether the Volta Laboratory Associates prior to the application for said patent were familiar in practice with any other form of record and if so, with what form?

A. Yes, we made a great many experiments with records in the form of zig-zag lines, cut out in waxy substances, and with similar records etched in metal; and we found that our reproducer worked as well with those as with the records of varying depth.

Q7. State briefly the operation of making records

916 of zig-zag form by etching in metal as practiced by the Volta Laboratory associates?

A. Those experiments were made mainly by Mr. Tainter and by Mr. A. G. Bell. The vibrating style was arranged so as to cut a zig-zag line on a waxy surface or to cut a zig-zag line in a thin layer of waxy substance spread on metal, the surface of the metal being subsequently etched by well known processes. Sometimes we used galvanizing and sometimes etching fluids.

Q8. Were you or not, prior to the application for Patent No. 341,214 aware of the capacity of the record groove in various form of records made by
917 you to feed the reproducing stylus laterally across the record, and if yea, state how such familiarity was acquired?

A. Yes, I was perfectly aware of that, as the result of a great number of experiments in which the groove cut in wax was made to carry the reproducing stylus across the record.

Q9. If the result of that work gave you a preference for a particular mechanical form of apparatus, please state the reasons that determined such preference?

A. I found that while that arrangement worked very well with a long lever it was not quite satisfactory when the lever was made as short as I
918 wished to make it to keep the size of the instrument within reasonable limits, and therefore some feed mechanism was added to the instrument so as to make the reproducer rougly follow the motion of the record.

Q10. As a matter of fact, would a short lever follow the record to some extent?

A. Yes, it would; but you couldn't rely on it always to remain in the groove.

Direct-examination closed.

Cross-examination by Mr. Bissing: 919

XQ11. Will you please tell me what direct share you had in the preparation of the application on which the patent in suit was granted. I mean to ascertain whether you personally consulted the gentleman who drew the application, whether you left that to your co-inventor Mr. Tainter, or whether perhaps you sent a written draft of instructions to your solicitor instead of calling personally upon him.

A. I believe I had a great many personal communications with the gentleman who drew up the specification; I don't remember drawing up any written statement; I believe the communications 920 were all oral.

XQ12. About what time, so near as you can now remember, did you reach results with your records cut in wax, I mean your vertically undulating cut wax records, which convinced you that the cut wax record was a success and, if perhaps not ready just at that time to be put upon the market was yet the type of record which you proposed to push?

A. Very early in 1881, in fact it was before the Volta Laboratory Association was actually formed.

XQ13. Were your experiments with the laterally undulating records made at an earlier or a later date? 921

A. I don't like to speak positively on that point for the simple reason that I myself have not made many experiments of that kind, but my impression is that experiments of that kind were made very shortly afterward by Mr. Tainter.

XQ14. What was the object of making experiments on laterally undulating records, at a time when the vertically undulating cut wax record had been decided upon by you to have been a success and to be the record which you proposed to push?

A. Of course we had to make experiments to find

922 out the best form and to make perfectly certain on that point, and that could only be done by experiments; in fact we tried everything we could think of whether it seemed promising or not. Our specification does not include anything like the number of experiments we made.

XQ15. Is it not a fact that you obtained very much better results with your vertically undulating cut wax record than with any laterally undulating etched record you ever experimented with?

A. My recollection is that it was very hard to distinguish one from the other as far as results went, but the vertically undulating record was found in
923 every way, to be the most convenient, and that's why we adhered to it.

XQ16. Do you happen to remember the exact mode of preparing the particular laterally undulating etched record which gave you the best results?

A. I don't think I would like to speak positively on that point. Of course you will understand that that was not my department. This section of the work was done chiefly by Mr. Tainter.

XQ17. Mr. Tainter is alive to-day is he not?

A. I have not seen him for many years.

Counsel for Complainant states that according to his latest information Mr. Tain-
924 ter is alive, and that it is the intention of Counsel for Complainant to examine Mr. Tainter as a witness in this case.

Cross-examination closed.

RDQ18. How did the zig-zag cut record compare as to results with the cut record of varying depth?

A. Well, when the undulations were not too pronounced they gave very much the same results.

CHICHESTER A. BELL.

[SEAL.] Reeve Lewis,
Notary Public,
District of Columbia.

CIRCUIT COURT OF THE UNITED STATES, 925

SOUTHERN DISTRICT OF NEW YORK.

VICTOR TALKING MACHINE COMPANY, *et al.*,
Complainants,

vs.

TALK-O-PHONE COMPANY,
Defendant.

926

VICTOR TALKING MACHINE COMPANY, *et al.*,
Complainants,

vs.

LEEDS & CATLIN COMPANY,
Defendant.

State and County of New York, ss.:

Albert L. Irish, being duly sworn, says:

927

I am President and Treasurer of the Talk-o-Phone Company and have made a prior affidavit herein, verified April 5, 1906. I have read the affidavit of Robert L. Thomae, which is based, not upon knowledge, but upon alleged information, without stating the sources of the information. The financial standing and character of the Talk-o-Phone Company has been fully set forth in the affidavit of Ensign, but I desire to say that the Talk-o-Phone Company has invested Seven hundred thousand dollars ($700,000) in its business, and is strong

928 financially. Thomae's statement that the business of the Company has been conducted for the past few years under several names is untrue. The business of the Company has been conducted solely under the name of the Talk-o-Phone Company, and the stockholders and persons interested in the Talk-o-Phone Company are not those who were interested in any prior company. The Talk-o-Phone Company when incorporated was a new and independent company organized by new and independent interests. The Talk-o-Phone Company, it is true, took over the business of the former Ohio Talking Machine Company. Thomae's statement
929 that the Talk-o-Phone Company manufactures only one type of talking machine is untrue. The different kinds of talking machines manufactured by the Company have already been fully described in the answering affidavits. The Talk-o-Phone Company does not manufacture records of any kind. The statements contained in the advertisements of the Talk-o-Phone Company referred to by Thomae are truthful statements. The business done and to be done by the Talk-o-Phone Company is large and profitable and will continue so to be unless complainants wrongful and threatening statements to the trade are continued. The Talk-o-Phone Company has manufactured and sold talk-
930 ing machines in great numbers and the list of names of the concerns to whom talking machines have been sold by the Talk-o-Phone Company is a truthful list in said advertisements. What relevancy all this has to the issues involved in these suits I am unable to see. The obvious purpose of Thomae is to attempt to prejudice the Talk-o-Phone Company by reason of statements made without knowledge or reliable information. Thomae's statement that the mechanical feed Talk-o-Phones are gotten up merely as an attempt to evade the patent in suit and that the mechanical feed performs no

function, is clearly untrue. This matter has been fully discussed in defendants' answering affidavits. 931

The Talk-o-Phone Company has no connection whatever with the Leeds & Catlin Company and has purchased no records or other goods from the Leeds & Catlin Company for the last nine months at least. During the past nine months the Talk-o-Phone Company has purchased no records from any concern for sale, but has devoted itself solely in the manufacture and sale of talking machines. No one interested in the Talk-o-Phone Company is interested in the Leeds & Catlin Company, and no one interested in the Leeds & Catlin Company is interested in the Talk-o-Phone Company, and no person is employed by the Talk-o-Phone Company who acts for both companies. The two companies are entirely independent, separate and distinct. As stated in the annexed affidavit of Mr. Leeds the connection of Mr. Leeds with the Talk-o-Phone Company at the time of the organization of the Talk-o-Phone Company was merely nominal and continued for a month or so until the permanent organization of the Company was effected. I fail to find in the moving affidavits upon either of these motions any proof of title in the complainants to the patent in suit. 932

ALBERT L. IRISH.

933

Subscribed and sworn to before me this 13th day of April, 1906.

T. P. Dalton,
Notary Public,
Kings County.

[NOTARY'S SEAL.]

Certificate filed in New York County.

934 CIRCUIT COURT OF THE UNITED STATES,
SOUTHERN DISTRICT OF NEW YORK.

VICTOR TALKING MACHINE COMPANY, *et al.*,
Complainants,

vs.

TALK-O-PHONE COMPANY,
Defendant.

935 VICTOR TALKING MACHINE COMPANY, *et al.*,
Complainants,

vs.

LEEDS & CATLIN COMPANY,
Defendant.

State and County of New York, ss.

Edward F. Leeds, being duly sworn, says:

I am President of the Leeds & Catlin Company and have heretofore made two affidavits herein, each verified April 5, 1906. I have read the affi-
936 davit of R. L. Thomae and do not understand the relevancy of his statements to the issues involved in either of the above entitled suits. Thomae's attempt to lead the Court into the belief that some connection exists between the Talk-o-Phone Company and the Leeds & Catlin Company is most surprising, since I believe that not only Thomae but counsel for complainants know fully that no connection whatever exists between the Talk-o-Phone Company and the Leeds & Catlin Company. The Leeds & Catlin Company has not sold records to the Talk-o-Phone Company for nearly a year last past, and, as already stated, the Leeds & Catlin Company never purchased machines from the Talk-

o-Phone Company except a few which it took in 937
part settlement of an account. No one interested in the Leeds & Catlin Company is interested in the Talk-o-Phone Company, and no one interested in the Talk-o-Phone Company is interested in the Leeds & Catlin Company, and neither company has any interest in the other company and no person employed by or acting for the one company is employed by or acts for the other company. At the time of the organization of the Talk-o-Phone Company in January, 1904, I was requested to become President of that company, by reason of my long experience in the talking machine business, but this I was unwilling to accede to. However, I was elected President of the company, notwithstanding my protests 938
and I sent in my resignation shortly thereafter. I never paid for any stock in the Talk-o-Phone Company and never saw any stock of the Talk-o-Phone Company issued to me, and never had any stock of the Talk-o-Phone Company issued to me in my possession and I do not now own or hold any stock or interest whatever in the Talk-o-Phone Company. If the Talk-o-Phone Company issued any stock to me for the purpose of having me elected President, the same stock was never turned over to me and was merely a formal transaction of which I have no knowledge. The Court should understand that the 939
Leeds & Catlin Company and the Talk-o-Phone Company absolutely and unconditionally represent different interests in no way connected. I fail to find in the moving affidavits upon either of these motions any proof of title in the complainants to the patent in suit.

E. F. LEEDS.

Subscribed and sworn to before me
this 13th day of April, 1906.

E. K. Van Beuren,
[NOTARY'S SEAL.] Notary Public,
Kings County.

Certificate filed in New York County.

940 **Affidavit.**

City of Washington, }
District of Columbia, } ss.:

Joseph Lyons, being duly sworn, deposes and says: I am and have been a solicitor for patents for many years past, and in that capacity I have, in behalf of Emile Berliner, of Washington, D. C., prepared and filed an application for Letters Patent of the Dominion of Canada, for an improvement in "Gramophone," and the papers hereto annexed are a true copy of the application, petition, oath, specification and drawing as prepared and filed by me with the Commissioner of Patents at Ottawa,
941 Canada, on December 7th, 1895, with the exception of the dates and signatures, which are left blank in the copy hereto annexed. The official filing receipt for said application is also hereto annexed. The application above referred to was never amended or changed in any way or manner prior to the grant of the patent. The patent was granted under No. 55079, on February 24, 1897, and was delivered to me and by me to the said Emile Berliner.

The Canadian Patent No. 55079 was intended to have, and I believe has the same specification and drawing as the U. S. Patent to Emile Berliner, No. 534543, granted February 19, 1895.

942 I am informed and believe that the original document is now in Canada.

JOSEPH LYONS.

Sworn to and subscribed before me }
this 12th day of April, 1906. }

[NOTARY'S SEAL.] Edwin S. Clarkson,
Notary Public,
D. C.

All communications should be addressed to the 943
Commissioner of Patents, Ottawa. When writing on this subject refer to No. 71661. Circular No. 1.

Department of Agriculture, Patent Office, Ottawa, Canada, 9th December, 1895.

Sir:

I have the honor to acknowledge receipt on the 7th instant of the Petition, Oath, Specification & Drawings applying for a Patent in favor of E. Berliner for "Gramopones," also the sum of Twenty dollars and to inform you that the papers have been filed and will meet with due attention, as soon as 3d copy of claims shall have been received 944
by this office.

I have the honor to be, Sir, your obedient servant,
R. Pope, Deputy Commissioner of Patents.
To J. Lyons, Esq., Washington, D. C.

Petition.

To the Commissioner of Patents, Ottawa:

The petition of Emile Berliner, of the City of Washington, in the District of Columbia, United States of America, electrician, showeth:

That he has invented new and useful improvements in Gramophones not known or used by others 945
before his invention thereof, and not being in public use or on sale; with his consent or allowance as such inventor for more than one year previous to his application for a patent in Canada.

Your petitioner therefore prays that a Patent may be granted to him for the said invention, as set forth in the specification in duplicate relating thereto, and, for the purposes of the Patent Act, your petitioner elects his domicile in the City of Ottawa, Province of Ontario.

And your petitioner hereby appoints Joseph

946 Lyons of No. 1003 F. Street, North West, Washington, D. C., U. S. A. his attorney, with full power of substitution and revocation, to prosecute this application, to sign the drawings, to receive the patent and to transact all business in the Patent Office connected therewith.

Signed at Washington, D. C., this day of 1895.

In the presence of

947

Oath.

City of Washington, } ss.:
District of Columbia, }

I, Emile Berliner, of the City of Washington, in the District of Columbia, United States of America, electrician, make oath and say, that I verily believe that I am the inventor of the new and useful improvements on gramophones, described and claimed in the specification in duplicate relating thereto and for which I solicit a patent by my petition dated day of 1895. And I further
948 say that the several allegations contained in the said petition are respectively true and correct.

Sworn before me at the City of Washington, D. C., U. S. A., this day of , 1895.

Specification.

949

To all whom it may concern:

Be it known that I, Emile Berliner, of the City of Washington, District of Columbia, United States of America, electrician, have invented certain new and useful improvements in gramophones, and I do hereby declare that the following is a full, clear and exact description of the same.

Reference is made to the accompanying drawing in which:

(Note: See stipulation, p. 541, Paragraph Third, as to the balance of this Canadian patent down to and including the signature "Emile Berliner." The Exhibit after the said signature concludes with the words set forth below.)

950

Washington, D. C.,
November , 1895.

Signed in the presence of

951

952 UNITED STATES CIRCUIT COURT,

SOUTHERN DISTRICT OF NEW YORK.

VICTOR TALKING MACHINE COMPANY, *et al.*

vs.

TALK-O-PHONE COMPANY.

THE SAME

953 vs.

LEEDS & CATLIN COMPANY.

On Motion for Preliminary Injunctions.

TOWNSEND, C. J.:

The bills allege infringement of claims 5 and 35 of the Berliner Patent, No. 534543. The Circuit Court for the Southern District of New York in the suit of this complainant against the American
954 Graphophone Company, after an exhaustive discussion of the issues presented sustained said claims and its decree was affirmed by the Court of Appeals on March 1st, 1906, after elaborate argument by able counsel and upon voluminous briefs in which apparently every material defence was presented and discussed.

The case on this motion is presented by some five hundred pages of affidavits and briefs; "Defendants' Exhibit Letters Patent" is a book of some 135 pages.

It appears that the machines of these defendants

are practically identical with those found to in- 955
fringe in the former suit. These defendants, however, have set up twelve defences claimed either to consist of new matter not before the Court on the former hearing, or to relate to matters which, while in the record at the former hearing were not considered or discussed. The Court is urged to dispose of these questions at the earliest possible moment in view of the great financial interests involved, and the advertisements and circulars issued by the respective parties relating to the patent in suit and the machines claimed to infringe, and of the serious damage involved whether a preliminary injunction be granted or denied.

956

The new defences are founded, *inter alia*, on the contentions that the patent in suit has expired by reason of the expiration of prior Berliner, German, French and English patents and a Berliner-Suess Canadian patent; by reason of Berliner's abandonment of his invention in view of said Berliner-Suess patent; that Berliner was anticipated by an Edison patent; that in the former suit the Berliner patent was not fairly in controversy; that complainant has been guilty of laches, and that defendants do not infringe in view of the prior art and especially of certain prior Berliner patents.

The first and second defences rest upon prior 957
Berliner German Patent No. 53622 and French Patent No. 207090. It is claimed that the Berliner patent in suit covers improvements in details of construction upon the Gramophone described and claimed in earlier patents, because his broad invention had been disclosed therein and especially in 372786 not before the Court in the original suit, and that those details were covered by said prior foreign patents; that the inventions in suit are identical with those of the foreign patents, and that as they expired prior to the commencement of this

958 suit, the patent in suit expired at the same time under the settled rule.

Bate Refrig. Co. vs. Sulzberger, 157 U. S., 1.
Siemens vs. Sellers, 123 U. S., 276.

It is claimed that the language of the specifications of the patent in suit supports this view where the patentee says that "one feature of my invention has reference to the method of recording sound" etc., and "the other features of my invention have reference to the construction of the details of both the recorder and the reproducer of the Gramophone," and that while he illustrated his reproducing ap-
959 paratus as a whole he does not state that it is his invention.

It is claimed further that unless the claims in suit are limited to certain improvements in details they are anticipated by Edison and Suess.

It is argued that the patent in suit expired prior to the commencement of this suit by reason of the expiration of said prior Berliner German and French patents. The drawings of the German patent are substantially identical with Figures 6 and 7 of the patent in suit and the specifications describe and the claims cover these constructions. The same is true, (barring the claims which are
960 immaterial) of said French patent.

The German patent being a patent of addition to prior Patent No. 45048 expired with the expiration thereof on November 7, 1902. The French patent expired July 19, 1905.

The French patent and the claims of the German patent cover improvements in details of the construction of Berliner's recorder and reproducer.

It is claimed by complainant that these details differ in construction and operation from those shown in the patent in suit and covered by claims not in issue, but this question can only be deter-

mined by expert testimony and this point does not 961
appear to be material in the determination of the issue herein.

The issue here presented, assuming the details to be substantially identical, is whether the prior patenting in a foreign country of a minor part of a broad or basic invention, such as that covered by the claims in suit, so affects the whole that the expiration of a foreign patent terminates the whole of a United States patent which includes both the minor parts and the broad main invention. The Circuit Court and the Circuit Court of Appeals in the original suit held that the claims in suit covered the broad invention. 962

The claims in suit are as follows:

> "5. The method of reproducing sounds from a record of the same which consists in vibrating a stylus and propelling the same along the record by and in accordance with the said record, substantially as described.
> 35. In a sound reproducing apparatus consisting of a traveling tablet having a sound record formed thereon and a reproducing stylus shaped for engagement with said record and free to be vibrated and propelled by the same, substantially as described."

963

The statute provides as follows:

> "Section 4887. No person shall be debarred from receiving a patent for his invention or discovery, nor shall any patent be declared invalid, by reason of its having been first patented or caused to be patented in a foreign country, unless the same has been introduced into public use in the United States for more than two years prior to the application. But every patent granted for an invention which has been previously

964 patented in a foreign country shall be so limited as to expire at the same time with the foreign patent, or, if there be more than one, at the same time with the one having the shortest term, and in no case shall it be in force more than seventeen years."

The test in each case, under the statutes, is whether the inventions are identical, as is said by the Supreme Court in Commercial Mfg. Co. vs. Fairbanks Co., 135 U. S., 176-194.

"A fair test of the question as to whether the American patent is anticipated by the
965 foreign patents, or is included in them, we think would be; were a person in this country, after the issue of the present American patent, to commence the manufacture of oleo-margarine by the precise process described in the Bavarian or Austrian patents, supposing that process had not been patented abroad, would the courts refuse an injunction to restrain the use of the process on the ground that it infringed that covered by the American patent? We can hardly deem it possible that any intelligent court would deny an injunction if applied for under such circumstances, and we think this fairly il-
966 lustrates the relation of the foreign to the American patent."

The cases cited do not satisfactorily settle this question or at most do not seem to support defendants' contention. Thus in Siemens v. Sellers, 123 U. S., 276, the Supreme Court held that the American patent expired with the foreign patent, saying that "the principal invention is in both, and if the American patent contains improvements this fact cannot save the patent from the operation of the law which is invoked."

In Western Electric Co., vs. Citizens' Tel. Co., 967
106 F. R., 215, the Court said as follows:

> "But, what is more directly to the point, the essence of the patent in suit contained in the first claim thereof, namely, the cutting out of the annunciator from the circuit employed for conversation, is embodied in the description of the invention in the foreign patents. The construction given in the specifications necessarily involves it. The case is, therefore, brought under the operation of the rule laid down in Siemens' Adm'r. vs. Sellers, 123 U. S., 276, 8 Sup. Ct., 117, 31 L. Ed. 153, even though it be conceded that 968
> there are differences in some details between the foreign and the home patents upon which independent claims might be based."

I fail to find in the numerous cases cited by counsel any authority for the proposition advanced by defendant that if an article made according to the description of the prior foreign patent would infringe any claim of the American patent no matter how insignificant, then the two patents are for the same invention and the American patent expires *in toto* with the prior foreign patent. In fact the interpretation placed by the Courts upon the decision of the Supreme Court in Siemens vs. 969
Sellers, *supra*, seems to be that the test is whether the principal invention of the domestic patent is found in the prior foreign patent.

I think, from such brief examination as I have been able to give the authorities cited that the rule contended for by the defendant does not apply to cases where the foreign patents which have expired do not cover the broad claims for the basic invention.

It is next contended that the patent in suit expired at the same time with certain other Berliner

970 German and French patents and an English patent, because these patents cover the invention of Berliner's United States Patent No. 564586. But an examination of the drawings of the prior British patent shows that there is omitted therefrom the Figure 10 of the United States Patent No. 564586, which was the only figure illustrating the form of the device covered by the claims here in suit.

There is nothing either in the specifications or drawings of the said British patent which describes, illustrates or shows the method or apparatus of the claims here in suit. These considerations apply equally to said earlier German and
971 French patents.

The fourth, fifth and sixth defences are founded upon a Canadian patent (No. 41901) to Berliner as assignee of Suess, upon which defendant lays great stress. This patent discloses and broadly claims the invention covered by the claims here in suit. It is contended that thereby Berliner admitted that Suess was the inventor of the reproducing apparatus in suit; that by Berliner's application as assignee of Suess he abandoned the broad claims in suit, and that as the said Canadian patent covered said broad invention and expired in 1899, the patent in suit expired with it.

The evidence introduced in the original suit
972 showed and the Court found on the Suess Patent 427279 that Suess was merely an improver of a particular form of swinging arm device and some of the language used in the specifications of this Suess Canadian patent, which, however, was not before the Court in the original suit, seems to indicate that its structure is merely an improvement on the broad Berliner invention, and Berliner himself afterwards applied for and obtained a Canadian patent for the broad invention covered by the claims here in suit.

But the Canadian patent in terms describes and 973
claims the broad generic invention of Berliner covered by the claims here in suit, as will be seen from the following claims:

> "5. In an apparatus for reproducing sounds from a record tablet, the combination with a reproducer mechanism consisting of a sound conveying tube and a diaphragm and stylus mounted at one end of the tube; of a freely swinging supporting frame for the said reproducer mechanism, substantially as described.
>
> "7. In an apparatus for reproducing sounds from a record tablet, the combination 974
> with a reproducer mechanism consisting of a sound conveyer, and a diaphragm and stylus mounted at one end thereof; of a supporting frame for the said reproducer, loosely pivoted to swing freely both laterally and vertically, substantially as described.
>
> "11. In an apparatus for reproducing sounds from a rotating record-tabet, a reproducing stylus mounted to have a free movement over the surface of the record tablet, substantially as described."

I think, therefore, that if this patent expired as
claimed in 1899 the patent in suit expired at the 975
same time, upon the authority of the decisions cited above.

It is contended by complainant, however, that the Canadian patent did not then expire because it was granted for a term of eighteen years from its date, namely, from February 11, 1893. The grant of the patent is for "The period of eighteen years from the date * * * subject to the conditions in the Acts" of Canada. The patent grant further provides as follows:

> "The partial fee required for the term of

976 six years having been paid to the Commissioner of Patents, this patent shall cease at the end of six years from date unless at or before the expiration of the said term the holder thereof pay the fee required for the further term or terms as provided by law."

The rule in such cases as I understand it is that the duration of the United States patent is limited by the duration of the legal term of the foreign patent and that it is not limited by any lapse or forfeiture of any portion of said term by means of any condition subsequent.

977 Pohl vs. Brewing Co., 134 U. S., 386.

In Bate Refrig. Co. vs. Sulzburger, 157 U. S., 508, the Supreme Court says as follows:

> "But the American patent will be granted upon the condition that, if you obtain the foreign patent first, your invention shall be free to the American people whenever, by reason of the expiration of the foreign patent, it becomes free to the people abroad."

In Bonsack Machine Co. vs. Smith, 70 F. R., 383, the Court construing the decisions held that the question in every case was when does the foreign
978 patent expire looking to its language when issued. Applying this test here I conclude with some hesitation that as the term fixed in the grant was for eighteen years, at the time when the United States patent in suit was issued, the latter does not lapse at the end of six years because of the failure of the patentee after the United States patent had issued, to pay the fee for a further term of six years. This conclusion seems to accord with that reached by the Circuit Court of Appeals for this Circuit in Welsbach vs. Appollo, 96 F. R., 332. In any event, for reasons hereafter stated, I have concluded to

resolve the doubt raised on this point in favor of 979
the complainant.

The defence founded on the prior Edison patent will not be discussed because said patent was before the Court in the original suit. The contention that by reason of a certain contract between the parties "the prior suit was not * * * a suit in which the Berliner patent in suit * * * was fairly in controversy" is not deserving of notice. The contract and the relations of the parties were fully before the Court and the record and briefs in said case are a sufficient answer to any such contention.

The other defences of laches and non-infringement 980
need not be considered.

I have given all of my time available during the past ten days to the examination of the various questions presented on this motion and have reached the conclusion that, except as to the Suess Canadian Patent No. 41901 the defendants have failed to introduce any new matter which would in my judgment have led the Courts to reach a different conclusion if it had been before them in the original suit. But even if I am mistaken in this view, and if the expiration of the Suess Canadian patent is a complete defence or if a decision of the questions raised as to the character and scope of the various patents now introduced for the first 981
time should be postponed until final hearing, yet I am constrained to grant the injunction in order to permit an appeal and a determination of the questions at the earliest possible moment.

The motion for a preliminary injunction is granted with leave to defendants to move for a stay pending the decision of these questions by the Circuit Court of Appeals.

Filed April 26, 1906.

982 At a stated term of the Circuit Court of the United States for the Southern District of New York, held in the Court room thereof in Post Office Building, in the Borough of Manhattan and City of New York, this 2d day of May, 1906.

Present—Hon. WM. K. TOWNSEND,
U. S. Circuit Judge.

983 VICTOR TALKING MACHINE COMPANY and United States Gramophone Company,
Complainants,

vs.

LEEDS & CATLIN COMPANY,
Defendant.

Decree for Preliminary Injunction.
In Equity, No. 8797.
On Patent No. 534,543.

Complainants' motion for preliminary injunction having come on to be heard before me on April 6, 1906, and the argument having been opened and then adjourned to April 13, 1906, at the request of complainants to afford to complainants' cousel an
984 opportunity to examine and consider the affidavits and exhibits offered on behalf of defendant, and the said motion having been argued before me on April 13, 1906, by Horace Pettit, counsel for complainants, and Louis Hicks, counsel for defendant; due deliberation having been had,

Upon the affidavits and exhibits filed on behalf of the complainants, including Canadian Patent No. 55079 offered by complainants in rebuttal on April 13, 1906, and upon the affidavits and exhibits filed on behalf of defendant, it is.

Ordered: That a Writ of Preliminary Injunction issue in this cause, restraining the defendant, the Talk-o-Phone Company, its associates, servants, clerks, agents and workmen, and each and every one of them, from manufacturing, using, or selling, until further order of this Court, sound reproducing apparatus or devices embodying the subject matter of Claim 35, of the Letters Patent in suit, which claim reads as follows, namely: 985

> "35. In a sound reproducing apparatus consisting of a travelling tablet having a sound record formed thereon and a reproducing stylus shaped for engagement with said record and free to be vibrated and propelled by the same, substantially as described." 986

And from manufacturing, using or selling, or in any way disposing of apparatus or devices which embody the method specified in Claim 5 of Letters Patent in suit, which claim reads as follows, namely:

> "5. The method of reproducing sounds from a record of the same which consists in vibrating a stylus and propelling the same along the record by and in accordance with the said record, substantially as described." 987

And from using or employing in any way the method specified in said Claim 5.

W. K. TOWNSEND,
United States Circuit Judge.

Filed May 2, 1906.

988 UNITED STATES CIRCUIT COURT,

SOUTHERN DISTRICT OF NEW YORK.

In Equity Case No. 8797.

VICTOR TALKING MACHINE COMPANY, *et al.*,
Complainants,

vs.

989 LEEDS & CATLIN COMPANY.
Defendant.

Ordered, this second day of May, 1906, that the writ of preliminary injunction granted by decree of even date be stayed pending the decision of the Court of Appeals, provided an appeal from said decree be promptly perfected; provided further that the defendant enter security in the sum of Ten thousand dollars ($10,000) to indemnify the complainants for damages and profits due to infringement accruing during the period of said stay, said
990 security to be approved by the Clerk of the Court, and to be entered within ten days from date, otherwise preliminary injunction to issue.

W. K. TOWNSEND,
United States Circuit Judge.

Filed May 2, 1906.

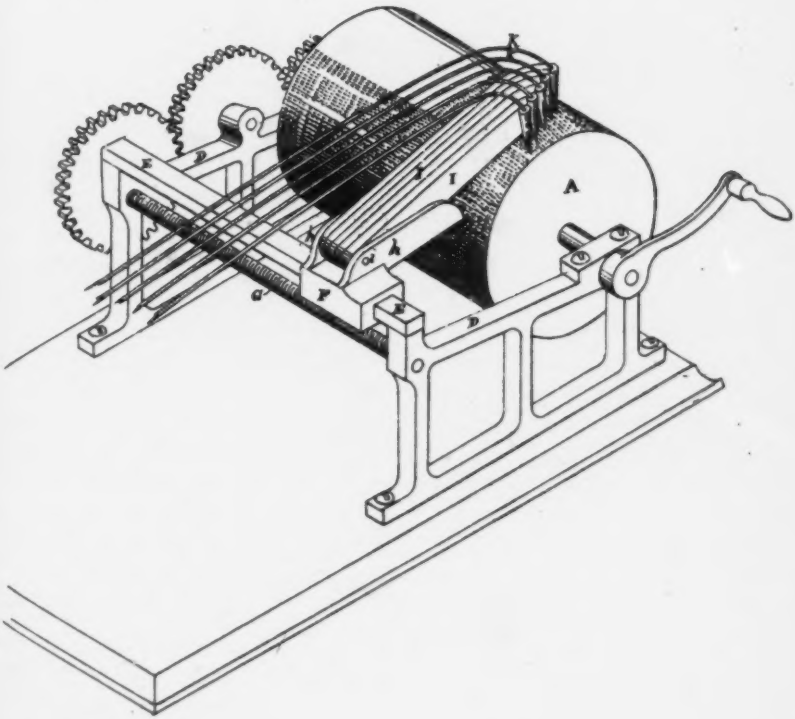
DEFENDANT'S EXHIBITS, LETTERS PATENT OF THE UNITED STATES AND ENGLAND.

331

L. PICKERING.

COPYING-TELEGRAPH.

No. 191,464. Patented May 29, 1877.



Witnesses

Geo. H. Strong

Jno. L. Boone

Inventor

Lewis Pickering

By Dewey & Co

their Attys.

UNITED STATES PATENT OFFICE.

LORING PICKERING, OF SAN FRANCISCO, CALIFORNIA.

IMPROVEMENT IN COPYING-TELEGRAPHS.

Specification forming part of Letters Patent No. **191,464**, dated May 29, 1877; application filed April 24, 1877.

To all whom it may concern:

Be it known that I, LORING PICKERING, of the city and county of San Francisco, and State of California, have invented a Typographical Transmitter for Automatic Telegraphs; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings.

My invention relates to a novel method of converting type-forms and other raised or engraved characters into transmitting-plates, so that, by causing the contact point or points of one or more telegraphic wires to traverse their surfaces in parallel and approximate lines, I can automatically transmit the matter represented by said forms or plates to distant stations, where the letters or characters can be reproduced by a suitable recording-instrument.

The principal object of my invention is to enable me to convert newspaper and other like forms of printing-types or engravings into telegraphic transmitters in a cheap, simple, and convenient manner, so that a fac-simile copy of the newspaper or other matter can be automatically transmitted over telegraphic wires in a speedy and convenient manner.

As the faces of the types used in newspaper-printing are usually quite small when compared with the types heretofore used in automatic telegraphy, a peculiar arrangement or adjustment of the contact-points is necessary, where several wires are used, in order to permit the several points to trace, in lines sufficiently close together to reproduce the outline of each letter.

My method of arranging these points in order to accomplish the object mentioned, together with the manner of preparing and operating my improved typographical transmitter, is more fully set forth and described in detail in the following specification, in which reference is made to the accompanying drawings, in which—

Figure 1 is a perspective view of my device.

Preliminarily, I will state that my invention can be applied to either flat or curved type-forms. In either case, the method of preparing the plate is the same.

For the purpose of this specification I have, in the present instance, represented a curved form applied to a cylinder, A, as hereinafter described.

To prepare my transmitting-plate, I take a printer's form, such as is set up in ordinary printing-type for printing upon a printing-press, and prepare from it a stereotype fac-simile in the ordinary manner of preparing stereotype-plates. I then fill the space in the plate between the types with some non-conducting material or substance, so as to insulate the faces of the types from each other and render the surface smooth and even. If the type-form is curved, such as is used on a cylinder-press, I secure it upon the cylinder A before applying the filling of non-conducting substance, and then, by rendering the surface of the material smooth and level with the faces of the types, so as to expose the faces, the cylinder is ready to be mounted in the frame D.

A filling of shellac or any other non-conducting substance of the consistency of putty, such as can be applied readily either warm or cold, will answer, and it is well, after the filling has been completed and the surface leveled, to sandpaper or otherwise polish or clean the surfaces of the type, to free them from any adhering portion of the substance. The type-plate can then be put in circuit by connecting one of the battery-wires with it, or it may be preferable to construct the cylinder A of copper, and allow its shaft to bear in the metallic frame D. Then, by insulating the frame the wire can be connected with it, so that the copper cylinder and the type-plate will be brought into the circuit.

It will be evident that I will now have a metallic type-plate in which the surfaces of the type are exposed in regular order, just as the types were originally set up, and with which it is only necessary to make the proper connections, to transmit a fac-simile copy to the opposite end of the contact wire or wires.

E is a horizontal bar, which extends across the frame D parallel with the cylinder A, and at a short distance from it. A slide, F, is arranged to be moved along this bar by means of a screw, G, which extends across the frame just below the bar E. The upper side of the slide is formed with two lugs or sides, *h h*, at a short distance apart, between which I place one end of each of several parallel arms, I I I,

and secure them by a shaft, i, which passes through the lugs or sides h h, and also through the ends of the arms. The opposite or free ends of these arms will then rest upon the cylinder A, one a little in advance of the other, as hereinafter described. The free end of each of these arms will then adjust itself to any inequalities on the face of the cylinder, independent of all the other arms.

The shortest arm on one side of the series may be straight, or preferably provided with a very slight curve at its outer end. The outer end of the next arm is slightly curved, so as to carry its extremity nearly in front of the first arm. The third arm is curved a little more, so as to bring its extremity nearly in front of the second, and so on, for as many arms as are used. This will cause the extremities of the several arms to stand in an oblique or spiral direction with reference to the surface of the cylinder.

K K K are the circuit-wires, as many being used as there are arms I. Each of these wires is provided with a platinum point, and the end of each wire is passed through a proper hole in the end of one of the arms, so that its point will project below the arm, and in this position the wires are secured and insulated from the arms by any suitable non-conducting filling placed around them in the holes.

Now, as the cylinder is rotated, the contact-points of the wires K K K will move over the surface of the cylinder and be fed slowly by the screws G from end to end of the cylinder, so as to come in contact with every part of the type-faces. The electric circuit will be completed in each wire every time its contact-point touches the metallic face of one of the types, and the circuit will be broken when the point touches the intermediate filling of non-conducting material.

A single wire or any number of wires can be used. I prefer, however, to use a number of wires, and a corresponding number of contact-points, so as to accomplish the transmission more speedily.

For receiving the telegram, I mount a drum at the opposite end of the lines, which will carry the chemically-prepared paper upon which the letter of the typographical transmitter is to be recorded by chemical decomposition in the ordinary manner of recording characters by the automatic telegraph system, or an arrangement could be applied for recording with ink or pencil. The recording-cylinder I will make larger in diameter than the transmitting-cylinder, and provide the two cylinders with a synchronal movement, so that the characters or letters will be enlarged at the receiving end of the line.

I thus provide for transmitting, in a simple and convenient manner, typographical engraved or other raised matter, so that a facsimile copy of the matter represented by the types can be speedily reproduced at a distant station.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The method of converting forms of printing-types into transmitting-plates for telegraphic purposes, consisting in filling between the faces of the types, either in the original form or in a stereotype cast taken therefrom, a non-conducting substance that will, at the same time, insulate the faces of the types and provide a smooth level surface for the contact-points of the wires to pass over, substantially as and for the purpose described.

2. The hinged arms I I I, arranged to carry the points of the wires K K K in their free ends, in combination with the slide F and feed-screw G, substantially as and for the purpose described.

3. The arrangement of the contact-points of the several parallel wires of an automatic telegraph apparatus in an oblique or spiral manner, substantially as and for the purpose described.

In witness whereof I have hereunto set my hand and seal.

LORING PICKERING. [L. S.

Witnesses:
JNO. L. BOONE,
FRANK A. BROOKS.

T. A. EDISON.

334 Phonograph or Speaking Machine.

No. 200,521. Patented Feb. 19, 1878.

Fig. 1.

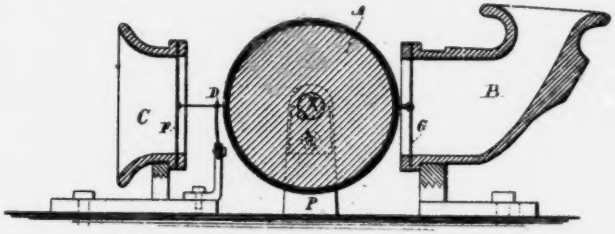


Fig. 4.

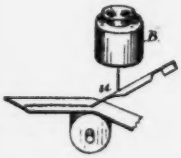
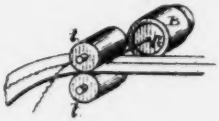


Fig. 3.



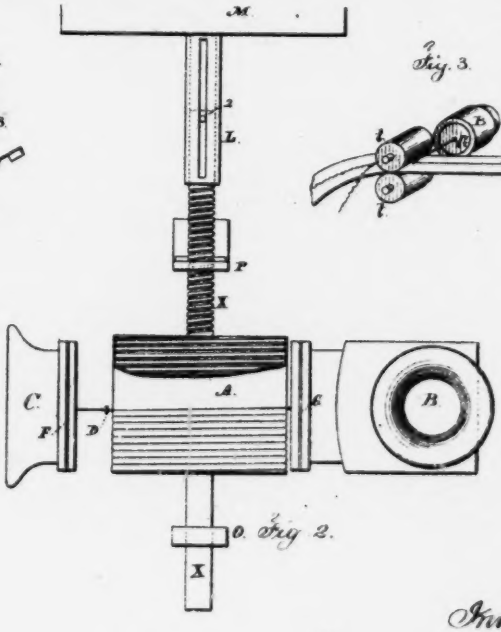


Fig. 2.

Witnesses

Chas. H. Smith

Harold Serrell

Inventor

Thomas A. Edison

per Lemuel W. Serrell

atty.

UNITED STATES PATENT OFFICE.

THOMAS A. EDISON, OF MENLO PARK, NEW JERSEY.

IMPROVEMENT IN PHONOGRAPH OR SPEAKING MACHINES.

Specification forming part of Letters Patent No. 200,521, dated February 19, 1878; application filed December 24, 1877.

To all whom it may concern:

Be it known that I, THOMAS A. EDISON, of Menlo Park, in the county of Middlesex and State of New Jersey, have invented an Improvement in Phonograph or Speaking Machines, of which the following is a specification:

The object of this invention is to record in permanent characters the human voice and other sounds, from which characters such sounds may be reproduced and rendered audible again at a future time.

The invention consists in arranging a plate, diaphragm, or other flexible body capable of being vibrated by the human voice or other sounds, in conjunction with a material capable of registering the movements of such vibrating body by embossing or indenting or altering such material, in such a manner that such register-marks will be sufficient to cause a second vibrating plate or body to be set in motion by them, and thus reproduce the motions of the first vibrating body.

The invention further consists in the various combinations of mechanism to carry out my invention.

I have discovered, after a long series of experiments, that a diaphragm or other body capable of being set in motion by the human voice does not give, except in rare instances, superimposed vibrations, as has heretofore been supposed, but that each vibration is separate and distinct, and therefore it becomes possible to record and reproduce the sounds of the human voice.

In the drawings, Figure 1 is a vertical section, illustrating my invention, and Fig. 2 is a plan of the same.

A is a cylinder having a helical indenting-groove cut from end to end—say, ten grooves to the inch. Upon this is placed the material to be indented, preferably metallic foil. This drum or cylinder is secured to a shaft, X, having at one end a thread cut with ten threads to the inch, the bearing P also having a thread cut in it.

L is a tube, provided with a longitudinal slot, and it is rotated by the clock-work at M, or other source of power.

The shaft X passes into the tube L, and it is rotated by a pin, 2, secured to the shaft, and passing through the slot on the tube L, the object of the long slot being to allow the shaft X to pass endwise through the center or support P by the action of the screw on X. At the same time that the cylinder is rotated it passes toward the support O.

B is the speaking-tube or mouth-piece, which may be of any desired character, so long as proper slots or holes are provided to re-enforce the hissing consonants. Devices to effect this object are shown in my application, No. 143, filed August 28, 1877. Hence they are not shown or further described herein.

Upon the end of the tube or mouth-piece is a diaphragm, having an indenting-point of hard material secured to its center, and so arranged in relation to the cylinder A that the point will be exactly opposite the groove in the cylinder at any position the cylinder may occupy in its forward rotary movement.

The speaking-tube is arranged upon a standard, which, in practice, I provide with devices for causing the tube to approach and recede from the cylinder.

The operation of recording is as follows: The cylinder is, by the action of the screw in X, placed adjacent to the pillar P, which brings the indenting-point of the diaphragm G opposite the first groove on the cylinder, over which is placed a sheet of thick metallic foil, paper, or other yielding material. The tube B is then adjusted toward the cylinder until the indenting-point touches the material and indents it slightly. The clock-work is then set running, and words spoken in the tube B will cause the diaphragm to take up every vibration, and these movements will be recorded with surprising accuracy by indentations in the foil.

After the foil on the cylinder has received the required indentations, or passed to its full limit toward O, it is made to return to P by proper means, and the indented material is brought to a position for reproducing and rendering audible the sounds that had been made by the person speaking into the tube B.

C is a tube similar to B, except that the diaphragm is somewhat lighter and more sensitive, although this is not actually necessary. In front of this diaphragm is a light spring, D, having a small point shorter and finer than the indenting-point on the diaphragm of B. This spring and point are so arranged as to fall

exactly into the path of all the indentations. This spring is connected to the diaphragm F of C by a thread or other substance capable of conveying the movements of D. Now, when the cylinder is allowed to rotate, the spring D is set in motion by each indentation corresponding to its depth and length. This motion is conveyed to the diaphragm either by vibrations through a thread or directly by connecting the spring to the diaphragm F, and these motions being due to the indentations, which are an exact record of every movement of the first diaphragm, the voice of the speaker is reproduced exactly and clearly, and with sufficient volume to be heard at some distance.

The indented material may be detached from the machine and preserved for any length of time, and by replacing the foil in a proper manner the original speaker's voice can be reproduced, and the same may be repeated frequently, as the foil is not changed in shape if the apparatus is properly adjusted.

The record, if it be upon tin-foil, may be stereotyped by means of the plaster-of-paris process, and from the stereotype multiple copies may be made expeditiously and cheaply by casting or by pressing tin-foil or other material upon it. This is valuable when musical compositions are required for numerous machines.

It is obvious that many forms of mechanism may be used to give motion to the material to be indented. For instance, a revolving plate may have a volute spiral cut both on its upper and lower surfaces, on the top of which the foil or indenting material is laid and secured in a proper manner. A two-part arm is used with this disk, the portion beneath the disk having a point in the lower groove, and the portion above the disk carrying the speaking and receiving diaphragmic devices, which arm is caused, by the volute spiral groove upon the lower surface, to swing gradually from near the center to the outer circumference of the plate as it is revolved, or vice versa.

An apparatus of this general character adapted to a magnet that indents the paper is shown in my application for a patent, No. 128, filed March 26, 1877; hence no claim is made herein to such apparatus, and further description of the same is unnecessary.

A wide continuous roll of material may be used, the diaphragmic devices being reciprocated by proper mechanical devices backward and forward over the roll as it passes forward; or a narrow strip like that in a Morse register may be moved in contact with the indenting-point, and from this the sounds may be reproduced. The material employed for this purpose may be soft paper saturated or coated with paraffine or similar material, with a sheet of metal foil on the surface thereof to receive the impression from the indenting-point.

I do not wish to confine myself to reproducing sound by indentations only, as the transmitting or recording device may be in a sinuous form, resulting from the use of a thread passing with paper beneath the pressure-rollers *t*, (see Fig. 3,) such thread being moved laterally by a fork or eye adjacent to the roller *t*, and receiving its motion from the diaphragm C, with which such fork or eye is connected, and thus record the movement of the diaphragm by the impression of the thread in the paper to the right and left of a straight line, from which indentation the receiving-diaphragm may receive its motion and the sound be reproduced, substantially in the manner I have already shown; or the diaphragm may, by its motion, give more or less pressure to an inking-pen, *u*, Fig. 4, the point of which rests upon paper or other material moved along regularly beneath the point of the pen, thus causing more or less ink to be deposited upon the material, according to the greater or lesser movement of the diaphragm. These ink-marks serve to give motion to a second diaphragm when the paper containing such marks is drawn along beneath the end of a lever resting upon them and connected to such diaphragm, the lever and diaphragm being moved by the friction between the point being greatest, or the thickness of the ink being greater where there is a large quantity of ink than where there is a small quantity. Thus the original sound-vibrations are reproduced upon the second diaphragm.

I claim as my invention—

1. The method herein specified of reproducing the human voice or other sounds by causing the sound-vibrations to be recorded, substantially as specified, and obtaining motion from that record, substantially as set forth, for the reproduction of the sound-vibrations.

2. The combination, with a diaphragm exposed to sound-vibrations, of a moving surface of yielding material—such as metallic foil—upon which marks are made corresponding to the sound-vibrations, and of a character adapted to use in the reproduction of the sound, substantially as set forth.

3. The combination, with a surface having marks thereon corresponding to sound-vibrations, of a point receiving motion from such marks, and a diaphragm connected to said point, and responding to the motion of the point, substantially as set forth.

4. In an instrument for making a record of sound-vibrations, the combination, with the diaphragm and point, of a cylinder having a helical groove and means for revolving the cylinder and communicating an end movement corresponding to the inclination of the helical groove, substantially as set forth.

Signed by me this 15th day of December, A. D. 1877.

THOS. A. EDISON.

Witnesses:
GEO. T. PINCKNEY,
CHAS. H. SMITH.

2 Sheets—Sheet 1.

337

T. A. EDISON.
Automatic-Telegraph.

No. 213,554. Patented Mar. 25, 1879.

Fig. 2.

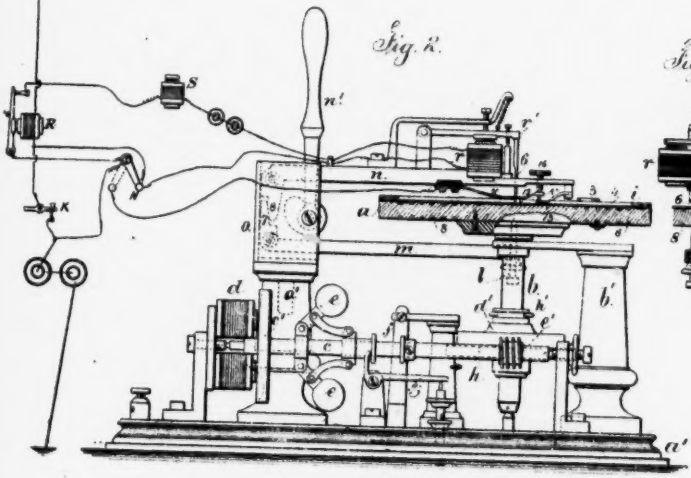
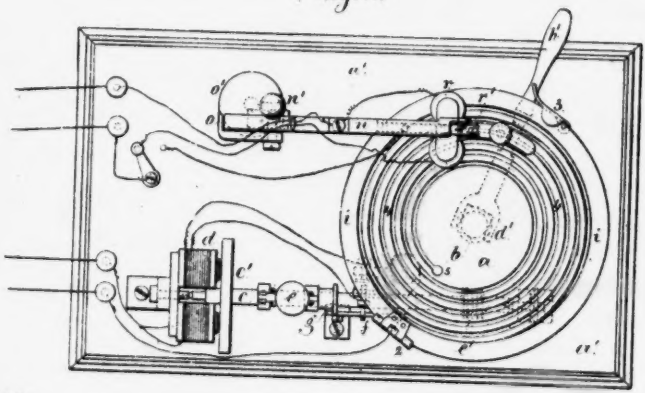


Fig. 3.

Fig. 1.



Witnesses
Chas. H. Smith
Geo. T. Pinckney

Inventor
Thomas A. Edison.
by Lemuel W. Serrell
Jun.

2 Sheets—Sheet 2.

338

T. A. EDISON.

Automatic-Telegraph.

No. 213,554. Patented Mar. 25, 1879.

Fig. 5.

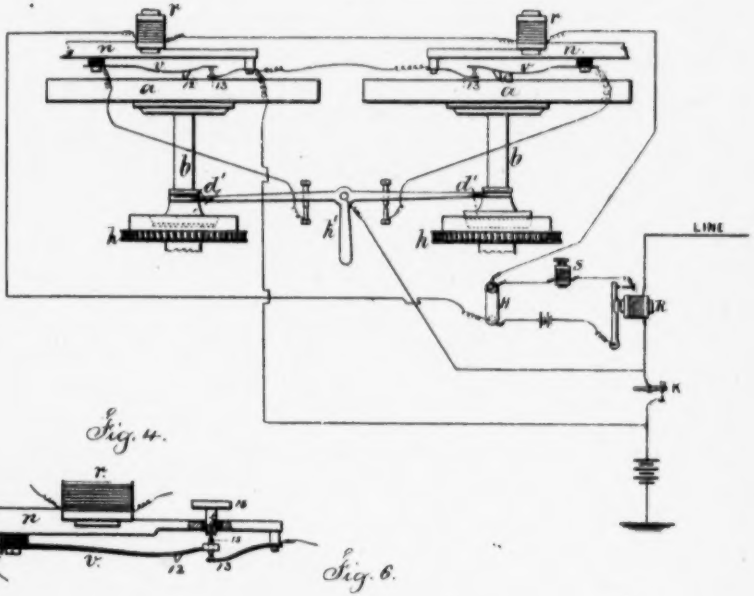


Fig. 4.

Fig. 6.

Witnesses

Chas. N. Smith

Geo. T. Pinckney

Inventor

Thos. A. Edison

for Lemuel W. Serrell

UNITED STATES PATENT OFFICE.

THOMAS A. EDISON, OF MENLO PARK, NEW JERSEY.

IMPROVEMENT IN AUTOMATIC TELEGRAPHS.

Specification forming part of Letters Patent No. **212,554**, dated March 25, 1879; application filed March 26, 1877.

To all whom it may concern:

Be it known that I, THOMAS A. EDISON, of Menlo Park, in the county of Middlesex and State of New Jersey, have invented an Improvement in Telegraphs, of which the following is a specification:

The object of this invention is to indent upon a sheet of paper the characters received from a distant station, or the characters transmitted from the same station, and to use such sheet of paper to transmit the same message, thus providing an automatic device for transmitting the same message more than once from one station to different stations, and for retransmitting the message automatically where it has to pass through several offices to reach its destination.

In the drawings, Figure 1 is a plan of the instrument. Fig. 2 is a side view with the indenting-plate in section; and Fig. 3 is a section of part of the indenting-plate and pin.

In chemical telegraphs a sheet of paper has been clamped to a disk, and the stylus resting upon such paper has been moved gradually toward or from the center of the disk by a volute groove in the surface of the disk itself or in a separate plate.

I make use of a volute groove in a disk or plate; but the first part of my invention relates to the disk or plate with volute groove or channel in the under surface and the guiding-point below such plate, while the point that operates upon the paper is above that plate.

The disk or plate *a* is mounted upon the vertical shaft *b*, sustained by the standard *b'* and bed *a'*. Any suitable motor is applied to revolve the shaft *b* and plate *a*.

I have shown an electric engine consisting of the shaft *c*, armature *c'*, stationary magnets *d*, governor-balls *e*, circuit breaker or commutator *f*, and lever-arm *g*, operated upon by the governor to open or close the local circuit to the magnets *d*, according to the speed of the engine, and thereby obtain uniformity. This electric engine is similar to that shown in my Patent No. 131,343.

The worm *c'* upon the shaft *c* serves to rotate the wheel *h* upon the shaft *b*, and there is a friction-clutch, *d'*, and lever *h'*, by means of which the wheel *h* is connected with or disconnected from the shaft *b*.

Upon the plate *a* is a clamping-frame, *i*, preferably hinged at one side, 2, and provided with a swinging catch, 3, at the other side. The paper to receive the message is laid upon this plate *a*, and held by the frame *i'* around its edges.

There are to be guide-marks upon the paper and also upon the disk *a*, so that the paper can be correctly positioned upon the disk in the first instance, and replaced absolutely correct when required. For this purpose it is preferable to perforate the paper at the center and at a point corresponding to the hole 5.

The volute groove 8 is upon the bottom of the plate *a*, and in it is the point of the pin *l*, that is at the end of the arm *m*, and above the disk *a* and paper is the marking-point 6 at the end of the arm *n*.

These arms *m* and *n* are hinged to a stock, *o*, upon a vertical standard, *o'*, and there is a vertical pivot upon which the stock *o* and the lever-arms *m n* swing horizontally. The arms *m n* have right-angled toes, as seen by dotted lines at 7 and 8, and the weight of the arm *n* is greater than that of *m*, and hence the point *l* is raised up into the volute groove, and the point 6 rests upon the paper. The lever *n'* acts to raise the point 6 off the paper by pressing the lever-arm *m* downwardly when it is desired to move both points away from the paper.

The marking-point 6 is made to indent the paper by the action of the electro-magnet *r* and its armature-lever *r'*, and thereby produce Morse or other characters by pressing the paper down into the groove 4 of the disk *a*, and this electro-magnet *r* is either in the main line or (by preference) in a local circuit.

In Fig. 2 these circuit connections are illustrated. The relay-magnet R operates by its armature the local circuit to the electro-magnet *r*, and in this is placed the sounder *s*.

The operator at the receiving-station closes the switch H of his key K, and the sending operator opens his switch.

When the instrument is employed to trans-

late or repeat the message into another circuit the delicate insulated spring circuit-closer *r*, tracing-point 12, and contact-point 13 are made use of, and these are placed in the circuit into which the message is to be sent in order that the tracer 12 may lift the spring *v* and break the circuit when resting on the portion of paper that is not indented, and when the indented portion is beneath said point the spring closes the contact at 13, and the message is sent to the distant station.

The arrangement of circuits shown in Fig. 2 is convenient. In this the movement of the switch H to the dotted positions causes the main-line circuit to pass through the insulated spring circuit-closer *r*, point 13, arm *u*, so that the indented paper will give motion to the circuit-closer and transmit the message previously recorded.

The spring 13 rests upon the paper, and the circuit-closing spring *v*, carrying the point 12, has also the screw 15 to close the circuit upon the spring 13 when the indentation passes below the point 12. This screw 16 requires to be adjusted to suit the condition of the paper or of the indentations. I therefore provide a T-head to the screw, and a turner, 16, above it, which passes through the arm *u*, so that the adjustment can be made while the instrument is at work, the said turner being insulated and having a notch for the T-head of the screw, as shown in Fig. 4.

There may be two disks arranged to receive their motion from the prime mover, each having a friction-clutch that is operated by a double lever, *h'*, whereby one disk is disconnected and stopped simultaneously, or just after the other disk is put into motion, so that when one paper is full its disk may be stopped just after the other is started, so as not to drop any signals, and the paper that is full is removed and another paper substituted. The same devices are available either in receiving or in sending messages.

In the diagram, Fig. 5, the connections for this purpose are shown, and the lever *h'* closes the circuit through the spring circuit-closer *r* and contact-point 13 in the act of shifting the power from one of the disks to the other.

It will generally be preferable to make the volute grooves in square or oblong plates, so as to receive ordinary square or oblong sheets of paper. These can be more easily filed away for future reference, and contain the dates and facts desired upon the face of the paper, in the angles thereof. Fig. 6 shows one of these square blanks. The message can be read upon these blanks, or it can be repeated at any time.

In place of having only one contact spring and point, it may be preferable to have three, placed side by side and close together, so as to allow for any inaccuracy in the position of the paper, or that may result from expansion or contraction of the paper. Either one of these points passing into the indentation in the paper will close the circuit and transmit the signal. The screw 16 allows the contact-points to be adjusted to suit the paper that is in use.

A puncturing or perforating point might take the place of the indenting or embossing point.

It is obvious that many modifications may be made to produce the same result. For instance, the electric engine may be replaced by a clock-work or other motor.

The arm *u* might be made to rotate instead of the plate *a*. The underneath spiral might be dispensed with, and the spiral on top of the plate might be continued out a greater distance from the center, and the additional spiral used for giving an outward movement to the arm. The plate itself might be dispensed with, and a drum used, with grooves cut lengthwise, and the indenting-magnet moved back and forward by suitable mechanism, the paper being fed from a continuous roll.

I am aware that it is not new to record telegraph-signals by indenting or embossing paper, as that method is adopted by Morse. Neither is it new to retransmit from such characters by causing them to give motion to contact mechanism, as that is shown in the English patent granted to William Thomson and Fleming Jenkin August 25, 1860, No. 2,047. Such embossing, however, was done on narrow strips of paper.

I claim as my invention—

1. In a telegraph in which the indented or embossed message is employed for transmitting electric pulsations, the means, substantially as specified, for recording the message in a volute line upon a sheet of paper, and for following that line with the circuit-breaking device in transmitting from such record, as set forth.

2. A plate provided with a volute groove upon its surface, and means for clamping a sheet of paper thereto, in combination with an indenting or perforating point, and means for maintaining the proper position of the point over the spiral groove, substantially as set forth.

3. A telegraphic blank of paper or similar material provided with one or more perforations, in combination with the plate receiving the same, and having corresponding marks to insure accurate adjustment in the various machines, substantially as specified.

4. The combination, with a spirally-grooved or volute plate, of an arm and indenting and transmitting mechanism supported by such arm, and a second similar groove for moving such arm, substantially as set forth.

5. In combination with a rest upon the paper, a point operated by the undulations of the surface of the paper and a circuit-closer and electric circuit to a distant receiving-instrument, substantially as set forth.

6. The arms *u* and *m*, pivoted to the stock *s*,

and turning upon a vertical pivot, in combination with the plate *a*, containing a volute groove, substantially as specified.

7. In combination with two revolving plates and the indenting or transmitting mechanism connected thereto, a clutch for connecting one plate before disconnecting the other, substantially as and for the purposes set forth.

8. The combination, with an indenting-instrument, electro-magnet, and spirally-grooved plate, of a sounder in the same circuit as the indenting-magnet, substantially as set forth.

Signed by me this 3d day of February, A. D. 1877.

THOS. A. EDISON.

Witnesses:

GEO. T. PINCKNEY,

CHAS. H. SMITH.

342

A. W. HALL.
Phonograph.

No. 219,939. Patented Sept. 23, 1879.

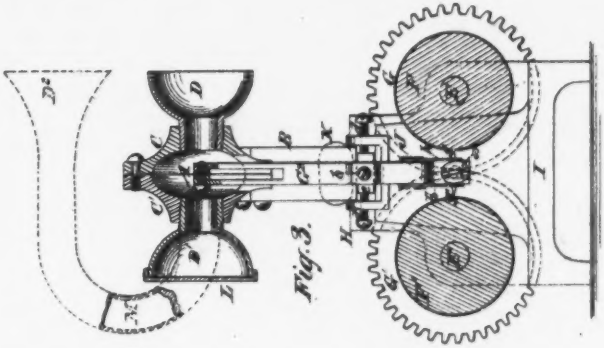


Fig. 3.

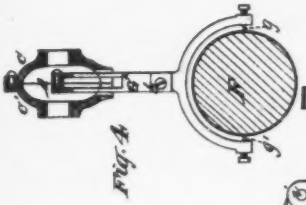


Fig. 4.

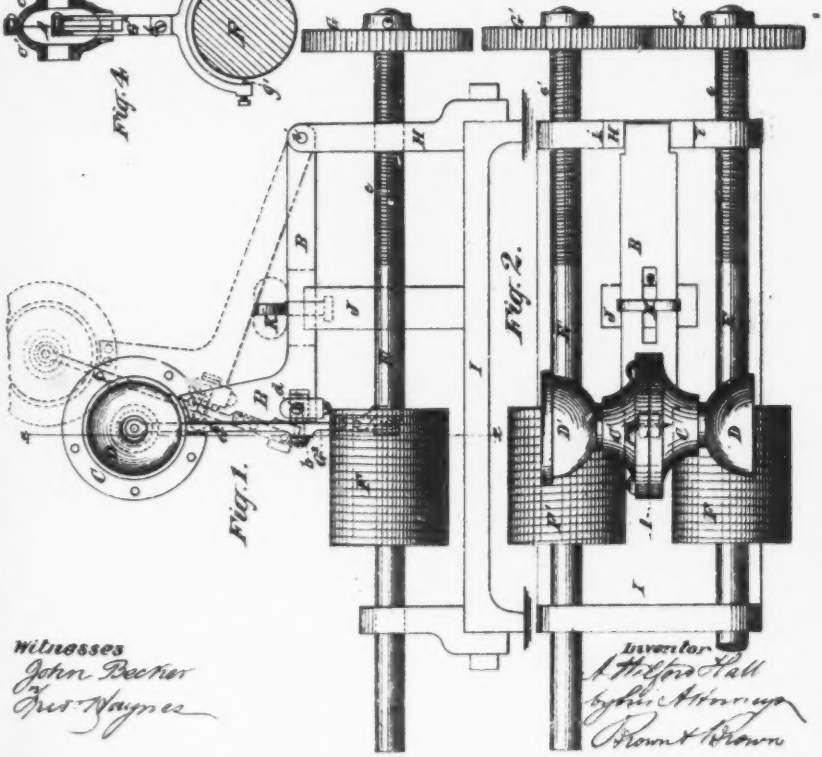


Fig. 2.

Fig. 1.

Witnesses
John Becker
Jas. Haynes

Inventor
A. Wilford Hall
by his Attorneys
Brown & Brown

UNITED STATES PATENT OFFICE.

A. WILFORD HALL, OF NEW YORK, N. Y.

IMPROVEMENT IN PHONOGRAPHS.

Specification forming part of Letters Patent No. 219,039, dated September 23, 1879; application filed November 29, 1878.

To all whom it may concern:

Be it known that I, A. WILFORD HALL, of the city, county, and State of New York, have invented certain new and useful Improvements in Phonographs; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification.

This invention consists in certain improvements in the phonograph which is the subject of Letters Patent No. 200,521, dated February 19, 1878, to Thomas A. Edison. In that instrument, as described by the patentee in the specification of his said Letters Patent, the sound-recording indentations or impressions produced on the tin-foil or yielding material are obtained by a single point and from one side only of the vibrating diaphragm, which is actuated by the sounds to be reproduced, and a single record only of the sounds is made, the indentations in such record being produced by the vibrations of the diaphragm in one direction only. Moreover, the vibration of the diaphragm is more or less restricted in consequence of the method of adjustment described in said Letters Patent, such adjustment having the effect of bringing a lateral tension on the diaphragm in one direction when the instrument is in its normal condition or at rest.

The objects of my invention are to provide for a more free vibration of the diaphragm, and to more fully utilize the vibrations of the diaphragm in both directions, both in the recording and in the reproduction of sounds, whereby I believe that several important advantages may be obtained, as will be hereinafter explained.

My invention consists, principally, in the combination, with the sound-recording or sound-reproducing diaphragm, of two points and one or more moving surfaces of yielding material, suitably arranged in connection with said points, whereby a divided record of the vibrations of the diaphragm is obtained and a double action is produced on the diaphragm for the reproduction of the sound—that is to say, in obtaining the record, one half is obtained from one point and from one side of the diaphragm by the vibrations of the diaphragm in one direction, and the other half is obtained from the other point and from the other side of the diaphragm by the vibrations of the diaphragm in the opposite direction; and in the reproduction of the sound the vibrations of the diaphragm in one direction are produced from one half of the record, and those in the other direction from the other half of the record. By this means less depth of penetration of the points is required than when the record is made by a single point, and, as it is not necessary to put the diaphragm under a normal lateral tension in one direction, the diaphragm will vibrate in response to less atmospheric disturbance than when a single point and recording-surface are employed.

My invention further consists in the combination, with the diaphragm of a phonograph, of two mouth-pieces, one on each side thereof, whereby several important advantages are obtained, as will be hereinafter fully explained.

My invention also consists in several improvements of the details of construction of the instrument, as will be hereinafter fully specified.

Figure 1 in the accompanying drawing is a side view of a phonograph with my improvements. Fig. 2 is a plan of the same. Fig. 3 is a vertical section of the same in the plane indicated by the line *x x* of Fig. 1.

A is the diaphragm, which may be in any way suitably supported, but is represented as clamped between two internally-concave disks, C C′, which are supported by a standard, B, and which are represented as fitted with separate tubes and mouth-pieces D D¹, one on each side of the diaphragm. A cap, L, is provided to fit and close either mouth-piece. It is shown in Fig. 3, placed on the mouth-piece D¹.

E E′ are two shafts arranged in suitable bearings below and parallel with the diaphragm, and carrying the two cylinders F F′, upon which are to be secured the tin-foil or other yielding material upon which the record of the diaphragm is to be obtained. The said shafts have provided upon them screw-threads *e e′*, and one of the fixed bearings provided for each is provided with a corresponding female screw-thread, so that as the said shafts rotate they also have a longitudinal movement imparted to them by the act of rotation.

The said shafts are represented as geared together by gearing G G¹, to rotate at similar speeds but in opposite directions, and in order

that both shafts and cylinders may have corresponding longitudinal movements, one has a right-hand and the other a left-hand screw-thread.

The cylinders F F' have each a helical groove provided in it of a pitch corresponding with the screw-threads on its respective shaft.

Between the diaphragm A and the cylinders F F' there is attached to the standard B a lever, G', the upper part of which is forked in such manner and shape, as shown in Fig. 3, as to pass through openings provided in the disks C C', and embrace the diaphragm between the two limbs of its fork, which are so shaped as to clamp or bear upon opposite sides of the diaphragm near its center only, leaving the rest of the diaphragm free to vibrate under the influence of the sound-waves.

The lower part of the said lever is furnished with two points, *g g'*, which are so situated between or relatively to the two cylinders F F' that one is capable of touching the tin-foil or other yielding material on one cylinder, while the other is capable of touching that on the other cylinder.

The said points are attached to the lever by means of elastic carriers *h h'*, or otherwise, in such manner as to be capable of adjustment to the requisite distance apart by means of a cam or eccentric, *a*, (see Fig. 3,) or other equivalent device attached to the lever for the purpose.

The fulcrum *b* of the lever is made adjustable in the standard B by being secured in a sliding block, *c*, which can be moved upon the standard in one direction or the other by means of adjusting-screws *d*, *d'* for the purpose of setting the lever, so that when the diaphragm and lever are at rest, and the points *g g'* are at the proper distance apart, the said points may both just touch or press equally upon the yielding material on the two cylinders.

In order to provide for the removal of the lever and points from between the cylinders when it is desired to move the cylinders without producing any marks upon the yielding surfaces thereon, or when it is requisite to place, remove, or replace the tin-foil or other yielding material upon the cylinders, the standard B, upon which the diaphragm and lever are mounted, is pivoted at *e* to a stand, H, erected upon the supporting-base I of the instrument, so that the said standard, with the diaphragm and lever, can all be raised, as shown in dotted outlines in Fig. 1.

When the diaphragm and lever are in the operative position shown in Fig. 3, and in full outline in Fig. 1, the standard B rests upon a post, J, where it is then held down firmly by a button or set-screw, K.

The operation of the instrument in recording is as follows: The tin-foil or other yielding material upon which the record is to be obtained having been secured upon the cylinders, and the standard having been brought down and secured upon the post to bring the points *g g'* between the two cylinders, and the cylinders having been so adjusted lengthwise, or the points so adjusted lengthwise, of the cylinders that one of the points is opposite to a groove in one cylinder and the other opposite to a groove in the other cylinder, the points are then adjusted so that each presses very slightly upon the foil or other material on one of the cylinders, and the shafts E E' and cylinders F F' are then set in motion by the clock-work or other motor provided for the purpose.

Either mouth-piece may be used; but the other one should be covered by the cap L, to prevent the neutralizing effect of air-waves passing around and acting upon the opposite side of the diaphragm to that which faces the open mouth-piece. Words spoken into the open mouth-piece then cause the diaphragm to vibrate, and the movements will be transmitted through the lever to the pins, and the vibrations will thereby be recorded by indentations in the foil or yielding material, one half of the record being obtained upon the material on one cylinder and the other half by indentations in the material on the other cylinder, each half of the record thus produced being the exact counterpart of the other half—that is to say, the indentations produced on the material on one cylinder being opposite the ridges left between the indentations of the material on the other.

The sound may be reproduced from either side of the diaphragm; but both sides may be utilized, and in order to provide for utilising both sides the mouth-piece D or D' may be removed, and have a bent tube, M, and mouth-piece D' substituted for it, as shown in dotted outline in Fig. 3, so that the sound-waves produced on both sides of the diaphragm may be conducted in one direction.

In the operation of reproducing the sound, the vibration or movement of the diaphragm in one direction is produced by the half-record on one cylinder, and the vibration or movement in the other direction by the half-record on the other cylinder, the movements in both directions being produced in a positive manner with a velocity exactly proportioned to the velocity of the movements of the cylinders.

It is not absolutely necessary to employ two cylinders to produce the double or divided record. I have shown in the diagram Fig. 4 a construction of the lever and points whereby a single cylinder may be used, the lower end of the lever, to which the points *g g'* are attached, being forked to so straddle or embrace the said cylinder that one point may act against or be acted upon by one side of the cylinder and the other point act against or be acted upon by the other side of the cylinder. In such case the cylinder should contain two helical grooves, the turns of each intervening between those of the other, and one of the points *g g* arranged to press or touch the foil or other surface which is to receive the record opposite one of the said grooves, and the other to press or touch it opposite the other of said

grooves, so that the double or divided record may be produced on the one surface, but in distinct lines of indentations.

I have hereinbefore briefly alluded to some of the advantages resulting from this duplex system of recording and reproducing the vibrations of the diaphragm, but will now explain others of these advantages.

With a single point and a record produced from one side of the diaphragm only, the diaphragm in the reproduction of the sound can only be moved in one direction by the motion of the indented surface, swinging back in the other direction by its own normal vibration, and with a velocity only equal to its own vibrational number, which of course depends on its size, weight, and rigidity. Hence if the rotation of the cylinder should vary in speed from this normal vibrational rate, as it necessarily must do in producing tones of various degrees of pitch, it follows that a constant irregularity must occur between the rates of diaphragmatic vibrations in the two opposite directions, and this is what I believe to be the cause of the nasal intonation noticed in the single-acting instrument; but I believe that with the duplex system this defect will be remedied, as the two opposite indented surfaces driving the diaphragm positively with equal velocity in either direction in perfect alternation should reproduce the spoken words with the same intonation which formed the record.

The employment of the lever between the diaphragm and the recording-surfaces, besides obtaining the advantages hereinbefore mentioned, enables the diaphragm to be brought to a position above or out of the way of the recording part of the apparatus, and so enables both of its sides to be made available, as hereinbefore described, for reproducing the spoken words or sounds, thereby making the reproduction much louder than when the sonorous effect is produced from one side of the diaphragm only, as is unavoidable when the recording-point is arranged directly opposite to the diaphragm. Moreover, it is by placing the diaphragm in this position, out of the way of the recording apparatus, and permitting the tube or mouth-piece on one side of the diaphragm to be closed, that I prevent the neutralizing, hereinbefore mentioned, of sound-waves acting on the opposite side of the diaphragm to that against which a speaker's voice is directed.

By providing for the use of two mouth-pieces, one on each side of the diaphragm, and connecting them by tubes of suitable length with the diaphragm, two persons seated on opposite sides of the instrument may carry on a rapid and uninterrupted conversation.

Although the greatest advantages resulting from the use of a lever between the diaphragm and the recording-surface are obtained by the use of two points giving a duplex or divided record, the advantage of leverage between the diaphragm and the recording-point would be considerable with a single point giving a single or undivided record.

I do not herein claim the combination, in a phonograph, of a diaphragm, a point, and a lever intervening between the diaphragm and the point.

What I claim as my invention is—

1. The combination, with the diaphragm of a phonograph, of two points connected with said diaphragm, and one or more moving surfaces adapted to be acted upon by or to act upon said points, substantially as herein described, whereby a duplex or divided record of the sound-vibrations is obtained or employed, substantially as herein set forth.

2. The combination, with the diaphragm of a phonograph, of two recording-surfaces, or surfaces having marks thereon corresponding with sound-vibrations, a lever connected with the diaphragm and having attached to it two points adapted one to operate upon or be operated upon by one of said surfaces, and the other to operate upon or be operated upon by the other of said surfaces, for the purpose of obtaining or employing a duplex or divided record, substantially as herein described.

3. The combination, with the diaphragm of a phonograph, of two cylinders adapted to carry yielding recording-surfaces, or surfaces having marks thereon corresponding with sound-vibrations, and a lever connected with said diaphragm and carrying two points, one of which is arranged to operate upon or be operated upon by the surface on one of said cylinders, and the other of which is arranged to operate upon or be operated upon by the surface on the other of said cylinders, substantially as and for the purpose herein set forth.

4. The combination, with the diaphragm of a phonograph, of two tubes and mouth-pieces, one on each side of the diaphragm, substantially as and for the purpose herein specified.

5. The combination, with the diaphragm of a phonograph and two mouth-pieces, one on each side thereof, of a cap adapted to fit and close either of said mouth-pieces, substantially as and for the purpose herein described.

6. The combination, with the diaphragm of a phonograph, of a mouth-piece communicating directly with one side of the diaphragm, and a bent tube communicating with the other side of the diaphragm and furnished with a mouth-piece presenting its opening in the same direction as the said directly-communicating mouth-piece, substantially as and for the purpose herein specified.

A. WILFORD HALL.

Witnesses:
FRED. HAYNES,
T. J. KEANE.

2 Sheets—Sheet 1.

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T. A. EDISON.
Phonograph.

No. 227,679. **Patented May 18, 1880.**

Fig. 1.

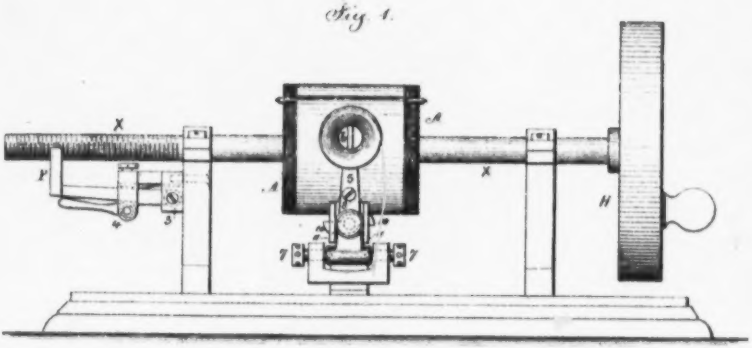

Fig. 2.

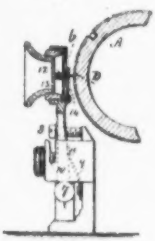

Fig. 5.

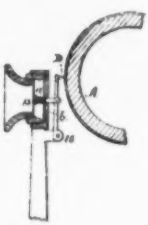

Fig. 6.

Witnesses.
Harold St. Perrell
Chas. H. Smith

Inventor
Thomas A. Edison
per Samuel A. Perrell
atty.

2 Sheets—Sheet 2.

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T. A. EDISON.
Phonograph.

No. 227,679. Patented May 18, 1880.

Fig. 6

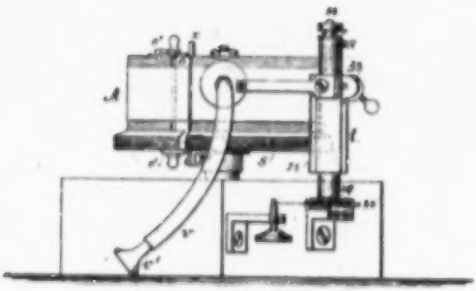


Fig. 7

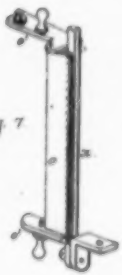
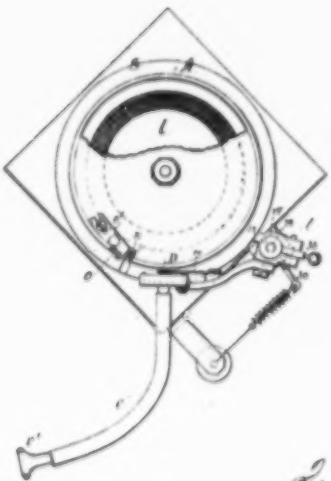


Fig. 5



Witnesses
Harold Serrell
Chas. A. Smith

Inventor
Thomas A. Edison
per Samuel W. Pruess
Atty

UNITED STATES PATENT OFFICE.

THOMAS A. EDISON, OF MENLO PARK, NEW JERSEY.

PHONOGRAPH.

SPECIFICATION forming part of Letters Patent No. 227,679, dated May 18, 1880

Application filed March 22, 1879.

To all whom it may concern:

Be it known that I, THOMAS ALVA EDISON, of Menlo Park, in the State of New Jersey, have invented an Improvement in Phonographs, (Case No. 174,) of which the following is a specification.

In Letters Patent No. 200,521, granted to me, a cylinder with a helical-grooved surface is revolved with its screw-shaft and moved along endwise. Upon this cylinder there is a sheet of foil or similar material, and the same is indented by the action of a point moved by a diaphragm, and this foil forms a phonogram that can be used to reproduce the original sounds when moved in contact with a point and diaphragm. In the said patent one of the points is shown as connected directly to the diaphragm, and the other point is upon a spring.

My present invention relates to improvements upon the phonograph patented as aforesaid, and the features of such improvement are hereinafter specially pointed out.

In the drawings, Figure 1 is an elevation of the phonograph. Fig. 2 is a section of the diaphragm. Fig. 3 is an end view of the cylinder containing the foil. Fig. 4 is a side view of the diaphragm and the device for moving the same.

The cylinder A has a grooved surface, as in aforesaid patent, and it receives the tin-foil or other material that is to be indented by the action of the diaphragm *b* and point to produce the record of the sound, which I term the "phonogram," and the diaphragm E and point D are adapted to form a phonet and reproduce the sound; but it is to be understood that the same point and diaphragm may be employed to record and to reproduce the sound.

In my present invention, as in my former patent, the motion of the recording-surface may be derived from clock-work, hand, or other power.

In order to insure great uniformity of speed and prevent irregularity in the movement by inaccuracies of work, dust, lack of oil, or any other source of local friction or resistance, I make use of an abnormally heavy fly-wheel, H, upon the shaft of the phonograph, so as to prevent any trembling movement and to resist any tendency to increase or lessen the speed, for upon uniformity of speed of the phonet with the phonograph depends the accuracy of reproduction, especially in musical sounds, that depend for their tone upon the number of vibrations per second.

The nut P is upon a lever pivoted at 3 and kept in contact by a cam, 4. When this lever and nut P are lowered the shaft X and cylinder A can be slipped endwise.

The arm 5, carrying the diaphragm *b*, should be pivoted at 7 7 by pointed screws, so as to adjust the position of the recording-point of the diaphragm *b* relatively to the grooves of the cylinder. The screw 8 determines the position to which the diaphragm and recording-point may approach to the cylinder. The spring 9 serves to move the arm 5 away from the cylinder, and the double-ended locking-piece 10, entering slots in the frame 11, holds the arm in place when in use.

One of the peculiarities of the present invention over the aforesaid patent is a spring, 12, of india-rubber or other suitable material, placed between the cross-bar or bridge 13 and the diaphragm, that serves as a damper to prevent false vibrations of the diaphragm and cause it to respond only to the actual movement given by the phonogram through the point D. It is also usually preferable to employ a spring, 14, between the point and the diaphragm. This is useful, in both the phonograph and the phonet, to prevent false sounds. This spring and diaphragm I have used in connection with telephones. I do not, therefore, herein lay claim to the same, broadly. I have combined the same with the recording or phonet point and the phonogram.

Another feature of invention relates to a lever between the diaphragm and the phonogram, whereby the relative movements of the parts may be varied. This lever *e* has a fulcrum at 15. If the connection to the diaphragm is between the point D and fulcrum 15, as in Fig. 5, then the motion of the point will be greater than the diaphragm, and when used in the phonograph will amplify the indentations

in the foil. If used in the phonet, the movement of the diaphragm would be lessened. I therefore prefer, in that instrument, to change the places of the point and diaphragm connection, as shown in Fig. 6, so as to amplify the movement of the diaphragm and increase the sound.

Another feature of my present invention relates to the foil-holder, which I place on a reel within the cylinder A, and draw the same out through a slot, as required from time to time, thus preserving the foil from injury and rendering it unnecessary to handle the same.

The reel *l* within the cylinder A is adapted to receive the foil in a roll upon it. One head of the cylinder is removable, so as to allow of the insertion or withdrawal of the reel. There is a slot in the cylinder, through which the foil is brought out, and there is a bar, *o*, forming part of the periphery of the cylinder, that is connected at its ends to the slides *o'*, (see Fig. 7,) one at each end of the cylinder, and there is a lever-bar, *x*, behind this slide-bar *o*. When the slide *o'* is drawn back from over the lever *x*, such lever can be swung out of the slot in the cylinder A, and the foil can be drawn out of the slot and wrapped around the cylinder, and then the end is placed behind the bar *x*, and carried by it into the slot of the cylinder, and then the slide *o'* is moved so that its edge passes over the lever *x*, and in so doing the foil is tightened around the cylinder and the lever *x* held in place. The surface of this cylinder is made with a helical groove, and the rim *s* of the cylinder is made with a similar screw or groove, and the sliding sleeve *t*, that carries the diaphragm-arm, has a screw-surface at 25, that comes into contact with the screw *s*.

With this character of instrument it is preferable to have the cylinder A upon a vertical shaft, and the sleeve *t* and diaphragm will be moved vertically. For this purpose the fixed stud 28 is vertical, and upon it is a tube, 29, of a size to receive the sleeve *t*, and having a groove and key, by which the sleeve *t* is allowed to slide endwise of the tube 29; but the two can be turned together on the stud or shaft 28. An arm, 30, on the tube 29, and a spring, serve to turn the tube, the sleeve, and the diaphragm and arm with sufficient force to bring the point D to bear upon the foil with the required force.

It is preferable to employ with the diaphragm a tube, *r*, and mouth-piece *r'*, such tube being flexible.

The speaking into and recording of the sounds in the phonograph will be proceeded with as usual, and the reproduction of the sounds will be as before; but in case the operator wants to suspend the recording in the phonograph or the speaking in the phonet he simply has to draw upon the flexible tube, which swings the parts so as to disconnect the screw-rack from the flange *s* of the cylinder. This at the same time moves away the recording or the phonet-point. The cylinder A can continue to revolve, and when the operator is ready he releases the pull upon the flexible tube, and the parts commence to act again at the exact place where the operation was suspended, because the screw-threads will only drop together when the proper part of the thread *s* comes to the corresponding part on the rack 25.

I employ the cam 33 and its lever upon the sleeve *t* to act upon the tube 29 and prevent the sleeve falling when the screw-threads are disconnected. This cam-lever 33 is self-acting, and it has to be raised when the sleeve *t* is to be lowered, so as to recommence at one end of the cylinder A.

By simply turning the sleeve and moving the diaphragm and the screw-surface back, the sleeve and diaphragm can be slipped endwise to any desired place upon the cylinder A to receive or deliver sounds.

I am aware that fly-wheels are employed in numerous ways for equalizing the speed of machinery. I do not claim the same, broadly. In experimenting with my phonograph I discovered that the reproduction of the sound was imperfect if the slightest variation occurred in the speed; hence the combination with the cylinder of a very heavy fly-wheel in proportion to the cylinder rendered perfect and reliable the action of the instrument in receiving and reproducing the sound by equalizing the speed.

I claim as my invention—

1. The combination, with the phonograph cylinder, shaft, and screw-surface, of a swinging nut or screw-surface, to connect or disconnect the parts that keep the recording or phonet point in position relative to the groove of the cylinder, substantially as set forth.

2. In combination with foil or a sound-recording surface, a point, a diaphragm, and a spring or damper acting to press the diaphragm toward the point, substantially as set forth.

3. In combination with a foil or sound-recording surface, a point, a diaphragm, and a spring between the point and the diaphragm, substantially as set forth.

4. The combination, in a phonograph or phonet, of a diaphragm, a point and a lever intervening between the diaphragm and the point, substantially as set forth.

5. The combination, with the spirally-grooved cylinder in a phonograph, of a reel within the cylinder carrying the foil or similar recording material, a slot in the cylinder, through which the foil is led out, and means for clamping the foil, substantially as set forth.

6. The combination, with the cylinder A, of the sliding bar *o* and lever *x*, to clamp the foil and stretch the same, substantially as set forth.

7. The swinging sleeve *t*, having an arm that carries the diaphragm, in combination with the cylinder A, and rim *s*, having a screw-thread surface, substantially as set forth.

8. The tube 29 upon the fixed stud 28, in combination with the sliding sleeve *t*, the diaphragm, and the cylinder A, substantially as described and shown.

Signed by me this 19th day of March, 1879.

THOMAS A. EDISON.

Witnesses:

S. L. GRIFFIN,

WM. CARMAN.

351

(No Model.) 3 Sheets—Sheet 1

W. A. LEGGO.

Automatic Telegraph.

No. 238,929. Patented March 15, 1881.

Fig. 1.

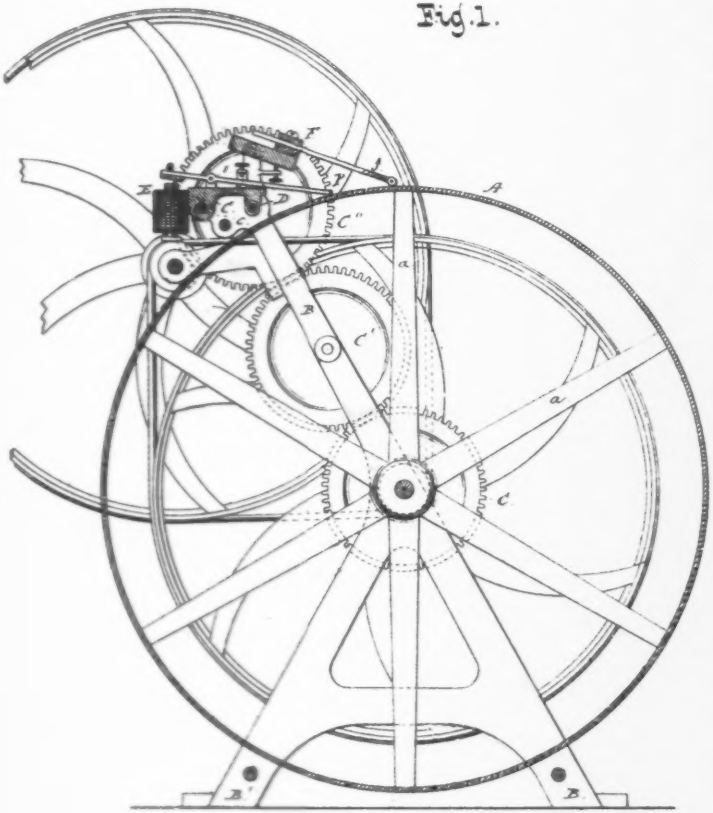


Fig. 4.

Witnesses.
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Inventor.
William A Leggo
by Dyer & Wilber
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352
(No Model.)

3 Sheets—Sheet 2

W. A. LEGGO.

Automatic Telegraph.

No. 238,929. Patented March 15, 1881.

Fig. 2.

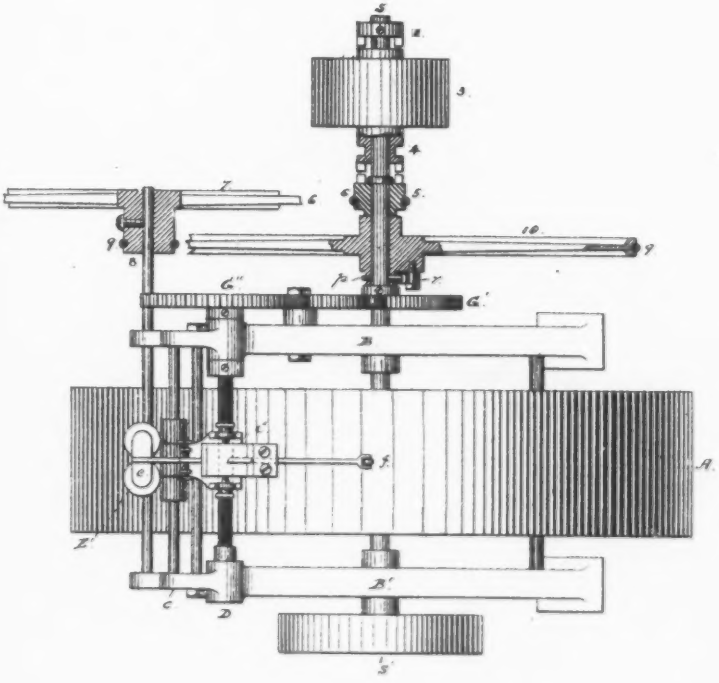

Fig. 3.

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(No Model.)

3 Sheets—Sheet 3

W. A. LEGGO.

Automatic Telegraph.

No. 238,929. Patented March 15, 1881.

Fig. 5.

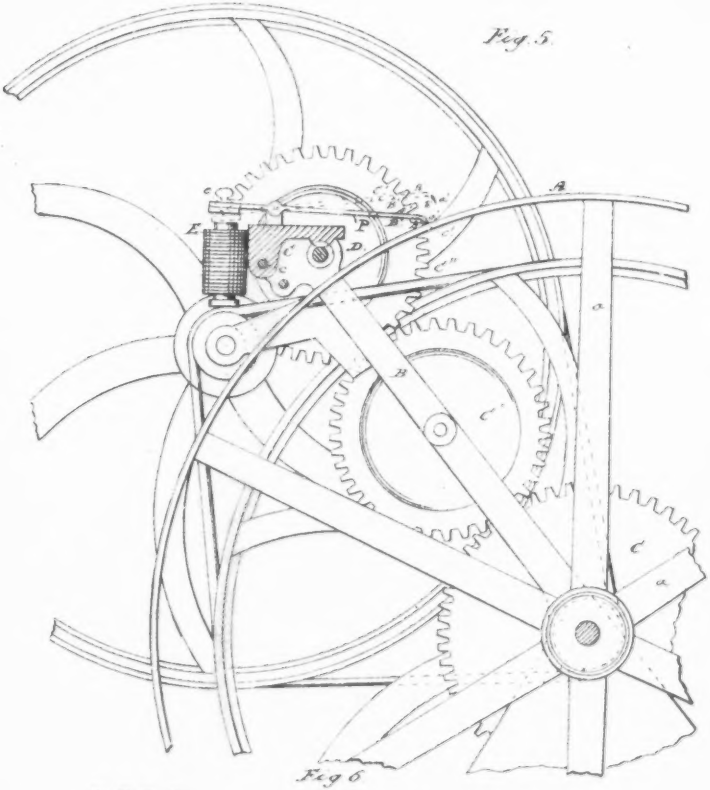
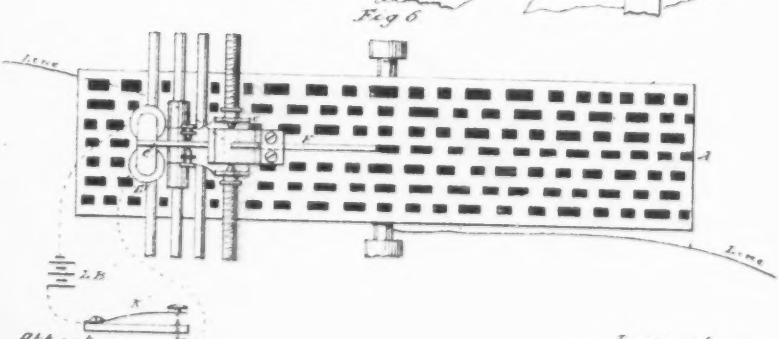


Fig 6



Attest,
F. H. Howard
M. J. Clegett

Inventor,
William A. Leggo
per Dyer & Wilder
Attys.

UNITED STATES PATENT OFFICE.

WILLIAM A. LEGGO, OF NEW YORK, N. Y., ASSIGNOR TO ELECTRO GRAPHIC MANUFACTURING COMPANY, OF SAME PLACE.

AUTOMATIC TELEGRAPH

SPECIFICATION forming part of Letters Patent No. 238,929, dated March 15, 1881.

Application filed November 30, 1880. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM A. LEGGO, of New York, in the county of New York and State of New York, have invented a new and useful Method of and Means for Automatic Electro-Telegraphy; and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The object of this invention is to furnish a system of automatic rapid telegraphic transmission in which the preparation of the message may be accomplished by the use of the ordinary key, thus avoiding the use of perforated paper and the necessity of machinery for perforating the paper, enabling one machine to be used both for the preparation for transmission and for the transmission of messages. A metallic drum capable of rotation in suitable bearings is arranged to be driven by any desirable motive power. Two sets of gearing are arranged between the prime motor and the drum, the change from one to the other being quickly and easily made by a shifting-lever. One set is calculated to give a comparatively slow rate of rotation to the drum for the reception upon it of the message at the ordinary speed of the "Morse operator," the other set giving the rapid rate permissible in automatic transmission. Upon a carriage are mounted, in such relation to the drum that when desired they may take thereupon, a stylus for transmission of the message placed upon the drum and a pen for placing the message thereon. This pen is controlled by a magnet mounted upon the carriage, the pen normally resting at its outer end upon the drum, while upon the other end of its lever it is provided with an armature, so that when the magnet is charged it is lifted from the surface of the drum, or vice versa. To the magnet leads a circuit from any suitable source of electric energy, a proper key being interposed in such circuit. The pen is charged with an insulating-ink, which may be any ordinary ink, to which has been added a little gum, mucilage, or sugar.

In operation the drum is set to rotate at its slower rate and the Morse key operated in the usual manner, the stylus being thrown back from contact with the drum. While the key is open the pen rests upon the drum, placing thereon a line of insulating-ink, whose width depends upon the width of the pen, which may be of any desired or effective width. Upon closure of the key the pen is lifted from contact with the drum, leaving its metallic surface clear. Thus the message is placed thereon in a series of insulating and conducting spaces, the latter representing the signals or the unitary portions forming a signal. When this preparation of the drum is completed the stylus is thrown down into contact with the drum and the pen removed therefrom. The stylus and drum are properly connected in the circuit leading to the point of reception, and the gearing shifted to give the drum its higher rate of rotation, whereupon impulses are transmitted over the line with great rapidity, corresponding exactly to the impulses which, through the medium of the pen, caused the record upon the drum.

It should be noted that the carriage carrying the stylus and the pen and its magnet is mounted upon a shaft on which it may slide, and rests also upon a screw-shaft receiving motion through intermediate gearing from the shaft of the drum, so that while the drum is rotating the carriage has a properly-adjusted motion at a right angle to the line of rotation, causing the pen and stylus to describe a spiral line upon the surface of the drum. The carriage rests upon the screw-shaft by a half-nut only, or by a pin, or by a knife-edge, so that it may be lifted therefrom and slid back to the starting-point upon the completion of its range of motion.

The message is received upon any suitably-prepared chemical paper, as is well understood in automatic chemical telegraphy, although the paper prepared with nitrate of silver and then lubricated, as set forth in other applications of even date herewith, is preferable.

It is desirable that the drum or other metallic surface used in the transmitter should be first thoroughly cleaned, and that then a coating of gum or equivalent be applied to its surface, the surface then being washed until all the superfluous gum be removed—in fact, till to ordinary tests, feeling or visual, no gum

apparently remains. Such treatment does not interfere with its conductivity, but serves to fill up any pores in the surface of the metal, rendering it smooth and avoiding or diminishing to a minimum friction thereon, and further preventing the adhesion thereon of any greasy matter, so promoting the preparation thereon of the message in insulating-ink.

By the arrangement thus generally sketched the Morse operator, using his key in the ordinary manner, may prepare and compose the matter to be set for automatic transmission, two or three minutes then sufficing for the transmission of what has occupied an hour for preparation, and which would have occupied an hour in transmission over the wire by the ordinary Morse method of telegraphy. This system, then, makes one wire suffice practically for many operators, increasing to that extent the capacity of each wire and providing for large amounts of business without the expenditure of large sums of money in additional wires, &c.

The same general principles are exceedingly applicable and desirable for fac-simile telegraphy. For such transmission the message, which may be a writing, map, plan, chart, picture, or anything else capable of graphic representation, is written or imprinted upon the face of the drum, which is then caused to rotate, as before explained, a perfect fac simile thereof being produced at the receiving station.

It is evident that, instead of the surface of the drum being used, a plate, band, ribbon, tape, or any other equivalent form may be used, which may be prepared in any desirable manner, and then placed in the machine, which in that case need have only the suitable quick motion; further, that instead of a drum a flat plate may be used, or any other form of message-receptacle, to which is connected gearing for giving the two rates of motion—slow and fast—hereinbefore described, when such plate is used in the machine for both preparation and transmission.

In the drawings is illustrated a convenient form of mechanism for carrying into effect the invention, Figure 1 being a side view and Fig. 2 a top view thereof, while Fig. 3 shows a detail for locking the gearing to the shaft. Fig. 4 is a diagrammatic representation of a signal as it appears upon the drum prepared for transmission. Fig. 5 is a detailed cross-section of the pen and a portion of the connected apparatus, and Fig. 6 a plan of part of the apparatus, showing the surface of the drum and circuit connection.

B B′ is a framing in which is supported the shaft S, upon which is mounted the drum A. Upon the shaft is the loose pulley 3, moved thereon by means of a shifting-lever (not shown) taking into the recess 4, in the sleeve of the pulley. On the shaft S is fixed the clutch 2, with which the pulley may be locked, so that the shaft and drum may be rotated directly with the pulley, a high rate of speed being the result. Loose upon the shaft S is the small pulley 5, from which a belt, 6, leads to pulley 7, from whose small or pinion pulley 8 a belt, 9, leads to pulley 10, also loose upon S, but provided with pawl *r*, taking upon rotation in the proper direction against pin *p* in shaft S and causing S to rotate with it. If the loose pulley 3 be thrown to engage with 5, its motion is communicated to S and A through 5 7 8 10, its motion thereby being very much slowed down.

Within the upward extensions of the parts B B of the framing B B′, and upon a shaft, *c*, supported in B B, is mounted a carriage, C, capable of moving horizontally along *c* and of turning thereon vertically as upon a pivot. At the front end of C a half-nut is formed, which rests upon the screw-shaft D, which receives the motion from S through gears G G′ G″. Upon this carriage is mounted a pen, P, pivoted thereon, and having upon the end of its lever an armature, *e*, taking over the poles of a magnet, E, supported and carried by the carriage C, and which is in an electrical circuit provided with any suitable key.

In Fig. 5 the operation of the pen is more clearly shown. As shown in dotted lines, the pen is raised from the drum, and the parts A′ B′ spring together at *a′ b′*, preventing the egress of the fluid C′, which is an ink treated so as to possess insulating qualities. When, however, the pen is allowed to rest upon the drum, as shown in full lines, the parts A′ B′ are separated and the ink escapes at *c′*, the result being as shown in Fig. 6, in which the black spaces represent the intervals during which the circuit would be broken, while the clear spaces indicate the closures necessary to the transmission of a message.

In Fig. 6 the dotted lines represent a local circuit, in which is included the key K′, local battery L B, and magnet E. The key being closed, the magnet attracts *e*, lifting the pen from the drum. The line is connected on one side to the pen *c* and stylus F and on the other to the drum, the stylus and pen being insulated from the drum.

The pen P is of such a construction that when lifted from the drum it shall not permit the ink to escape therefrom, but that the mere laying of the end upon the drum or other surface shall cause it to open and permit the escape of the ink. Such a pen is shown in another application of even date herewith.

Upon the carriage C is also pivotally supported the stylus F, whose end preferably carries a roller, *f*. This stylus, when in use, lies upon the surface of the drum. When not in use it is raised therefrom.

The operation is as follows: The pulley 3 is thrown to engage with clutch 5, and thus rotate the drum at low speed. The stylus F is turned up from contact with the drum, the pen P, charged with ink, bearing normally upon the surface of the drum, laying thereon an insulated line. The operator manipulating his key, the magnet E attracts the armature *e* whenever

the circuit is closed, lifting the pen from the drum and leaving thereon the conducting signal-spaces, as shown at *n n n*, Fig. 4. The drum, rotating, causes the rotation of D, giving a horizontal movement to C, so that the entire surface of the drum may be covered by a spiral line. When as much as is desired has been composed upon the drum the carriage is lifted from contact with D and slid back to the place of starting, the pen is removed from contact, and the stylus is put into contact with the drum. The pulley 3 is thrown to engage with 2, and thus to rotate the drum at high speed. The stylus and drum are properly connected in the electrical circuit and the motive power applied. As the stylus passes over the places inked by the pen the circuit will be broken and no current will pass, while in passing over the spaces left clear by the raising of the pen the circuit will be closed and impulses sent, these impulses corresponding exactly to the impulses used in preparing the drum, which were the same as though the key had been connected directly in the transmitting-circuit.

In describing the operation it was stated that the pen is moved back to the place of beginning for transmission. Instead thereof the motion of the machine may be reversed and the last of the message placed in the drum transmitted first. When all the message has been received it is simply necessary to commence the reading at the last end of the receiving-strips, which in practice will be probably the more convenient.

As hereinbefore described, a positive copy of the message to be sent is shown as placed upon the drum. When desired a negative copy may be placed thereon, in which case the unitary members of the signals would be placed upon the drum in insulating-ink, while the spaces, &c., would be left clear—the reverse of what is shown in Fig. 4.

It is evident that the magnet E and its circuit and the key therein may be dispensed with when desired, and that the end of the pen itself may be used as the key, the operator manipulating the pen itself directly, instead of controlling it indirectly through intermediate devices.

What I claim is—

1. The method of automatic transmission herein described, which consists in causing the ordinary manipulations of a key to be recorded in insulating and conducting spaces upon a suitable surface, and then using the record so made to automatically control the transmitting-circuit, substantially as set forth.

2. The combination, with one transmitting-surface, of two sets of gearing, one adapted to give the surface a much greater speed of movement than the other, and means for changing from one to the other, substantially as set forth.

3. The combination, in an apparatus for preparing messages for telegraphic transmission, of a conducting surface, a pen adapted to normally ink the surface thereof, and devices arranged to lift the pen from the surface when it is desired to indicate thereon signals for transmission, substantially as set forth.

This specification signed and witnessed this 19th day of November, 1880.

W. A. LEGGO.

Witnesses:

J. HERMANN WAHLERS,

JAMES A. PAYNE.

357
(No Model.)

3 Sheets—Sheet 1.

J. H. ROGERS.

AUTOMATIC TELEGRAPH.

No. 277,349. Patented May 8, 1883.

Fig. 1

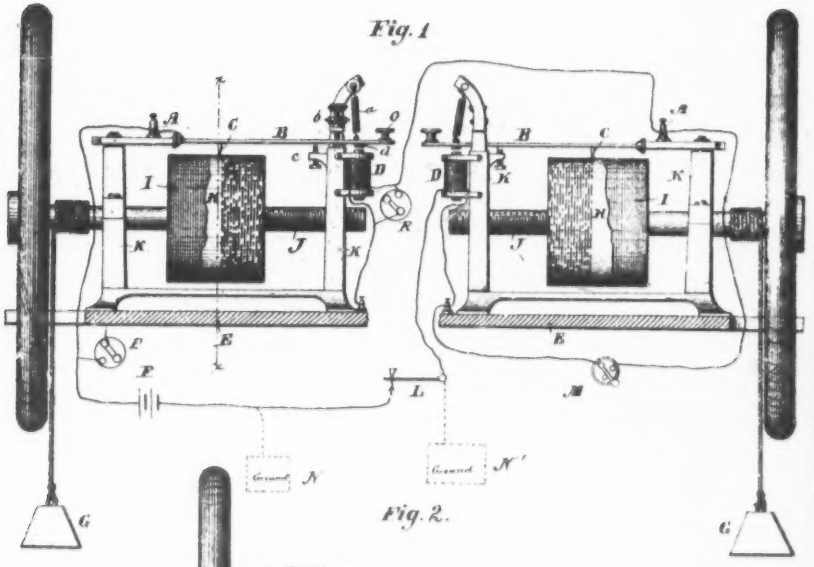


Fig. 2.

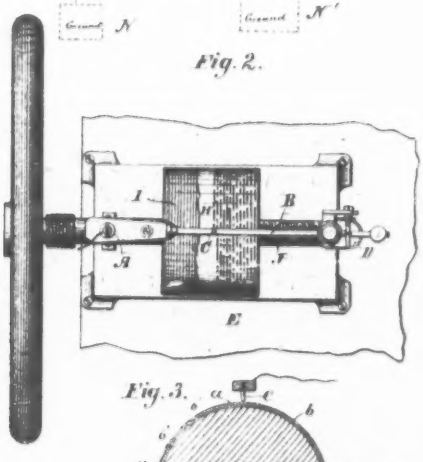
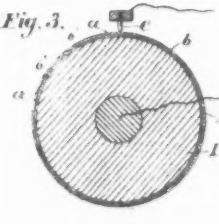


Fig. 3.



Witnesses

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Edw. H. Byrne.

Inventor

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Attorneys

357

358
(No Model.)

3 Sheets—Sheet 2.

J. H. ROGERS.

AUTOMATIC TELEGRAPH.

No. 277,349. Patented May 8, 1883.

Fig. 4.

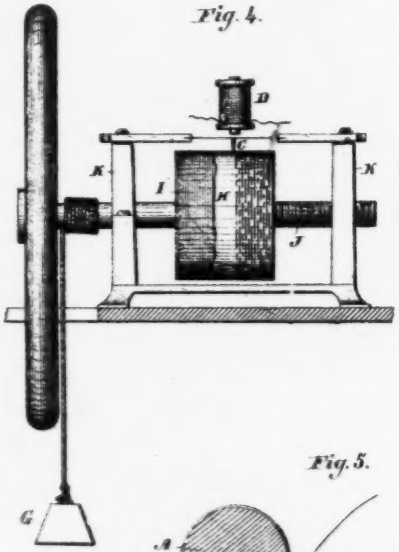


Fig. 5.

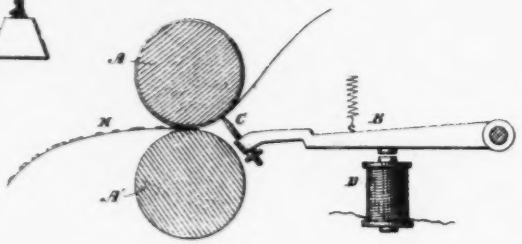
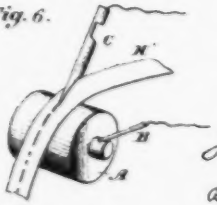


Fig. 6.



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Attorneys

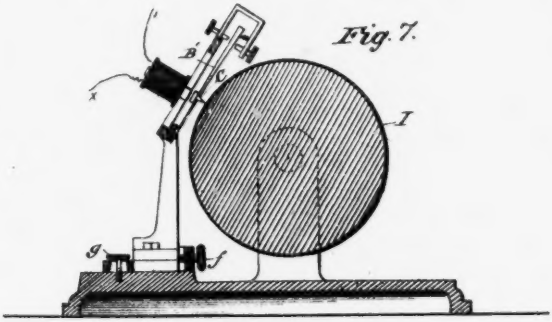
359
(No Model.)

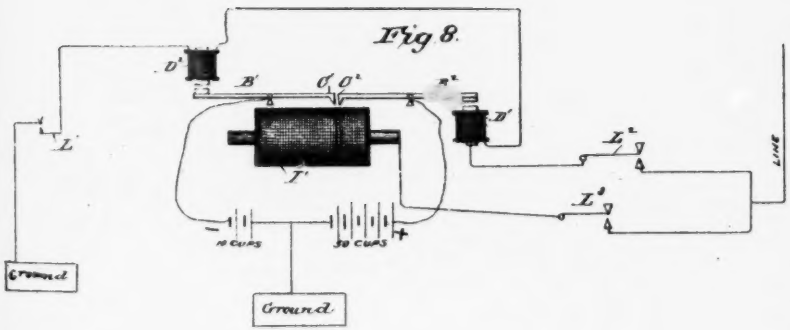
3 Sheets—Sheet 3.

J. H. ROGERS.

AUTOMATIC TELEGRAPH.

No. 277,349. Patented May 8, 1883.





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UNITED STATES PATENT OFFICE.

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AUTOMATIC TELEGRAPH.

SPECIFICATION forming part of Letters Patent No. 277,349, dated May 8, 1883.

Application filed March 7, 1883. (No model.)

To all whom it may concern:

Be it known that I, JAMES HARRIS ROGERS, of Washington city, District of Columbia, have invented a new and useful Improvement in Automatic Telegraphs; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification.

In the system of telegraphy known as the "automatic" or "rapid" system various means have been resorted to for sending and receiving electric impulses of greater or less duration to form dots and dashes to conform to the Morse code.

Among those systems which are most analogous to the improvement which I am about to describe as my invention, I may refer to a fillet of paper having a metallic face, or a thin strip of metal upon which is previously placed, in an insulating-ink, dots and dashes, which fillet, when passed through the terminal contacts of an electric circuit, make and break the same in accordance with the record, and transmit corresponding impulses to the other end of the line.

Another means of sending messages is to take a fillet of paper or other material and simply emboss, by means of a stylus, the dots and dashes, and then pass this embossed strip into a device in which the embossments act mechanically to raise and lower one end of a spring or lever, whose other end is arranged to make or break contact between the terminals of a circuit. Still another plan is that patented by me August 20, 1882, with J. W. Rogers as co-inventor, in which a thin metal strip was embossed with dots and dashes and the strip passed beneath a contact-point, which closed the circuit whenever said point touched an embossment or elevation, and broke the circuit at the intervening points. In this case it will be perceived that the metal embossment successively form the terminals of one end of the circuit.

My present invention is based upon this latter principle; and it consists in a novel arrangement of stylus and indented metal foil or sheet in an automatic telegraph for the purpose of transmitting electrical impulses by breaking connection over the indentations in the strip or sheet and making contact with the intervening spaces lying in the normal plane of the strip or sheet, in contradistinction to making contact with raised embossments.

My invention also consists in the method of preparing and transmitting a message without removal of the strip or sheet from its carrier; and also, further, in the means for avoiding tailings or static charges on the line, as will be fully set forth hereinafter.

Figure 1 is a side view, partly in section, of two of my instruments arranged for illustrating the working of the same. Fig. 2 is a plan view of one of the instruments. Fig. 3 is a cross-section through the line x x of Fig. 1. Fig. 4 is a side elevation, showing a modification of my invention. Fig. 5 shows the arrangement of a Morse register for receiving the messages transmitted by my instrument. Fig. 6 shows a chemically-prepared fillet, upon which the message may be received. Fig. 7 shows a vertical section of a further modification of the invention, and Fig. 8 shows a diagram illustrating the circuits and arrangement of parts for preventing tailings or static charges on the line.

Referring to Fig. 1 of the drawings, E is the base-plate of the instrument, provided with uprights or standards K K. In these standards are supported the ends of the shaft J of the cylinder I. The periphery of this cylinder is threaded or formed with a spiral groove, and so, also, is one end of the shaft, which latter is received into the interiorly-threaded bearing of one of the standards K. The pitch or rectilinear progression of the threads on the cylinder and its shaft is exactly the same. For giving rotary movement to the shaft and cylinder, so as to secure its progressive revolution, a weight, G, is suspended by a cord wound around its shaft, and a hand-wheel is fixed upon the shaft for winding it up or controlling its motion. These actuating devices, however, may be replaced with any other motor, or any suitable means for rotating the cylinder may be provided.

Upon one of the standards K is fixed a horizontal lever or spring-bar, B, bearing a stylus or point, C, which is adapted to press upon and indent the tin-foil into the spiral groove of the cylinder when the lever B is depressed,

and which rises out of contact when the lever B is drawn up. This lever is insulated from both of the posts K K, and is drawn up by a spring, *a*, its upward movement being limited by a stop-screw, *b*, while said lever is drawn down by the influence of the electro-magnet L upon the armature *d* borne by said lever.

Now, in describing the working of the instrument, I will first describe the simplest method of forming a record of signals for subsequent transmission. For this purpose a slow, uniform rotary motion is given to the cylinder I, and the lever B is worked by the knob O as a telegraphic key, which causes the point or stylus C to indent the tin-foil H with dots and dashes from the direct action of the key by the operator, as indicated in Fig. 3. Now, for transmitting this message the lever B is raised and the cylinder I is run back to the starting-point, so that the point C is at the beginning of the message. Electrical connections of the wires are then so arranged that the point C is one terminal of the line and the tin-foil or cylinder I the other terminal. The lever B is then slightly adjusted up by set-screw *c*, so that the stylus-point C will not touch the bottom of the grooves or indentations on the tin-foil, which are shown at *a'*, Fig. 3, but will touch the intervening spaces, *b'*. It will therefore be seen that as the cylinder revolves electrical contact is made just the reverse of the characters on the tin-foil, or by the spaces between the indentations. These electrical impulses, however, when taken off on a Morse register geared reversely to the usual manner, as in Fig. 5, will exactly reproduce the characters on the original tin-foil jacket. The distinctive feature of this part of my invention, then, it will be seen, is in making contact between the indentations, in contradistinction to closing contact with raised embossments, as in my former patent, hereinbefore referred to, and the merit of my present method is to be found in the fact that the same point which makes the indentations or manufactures the record also transmits the record by making and breaking contact, as described, without removal or transfer of the tin-foil from the place where the record is first made upon it.

I will now describe how the two instruments shown in Fig. 1 can be used—one for making and transmitting the message, and the other for receiving it. For this purpose the key L must be ignored and the ground-connections N N' considered. We will suppose the instrument on the left is the transmitting-station and the one on the right is the receiving-station. Now, switch P is open and R and M closed, and the two cylinders I I being in motion the current from battery F flows as follows: to insulated lever B and point C, touching the spaces *b'*, between the depressions on the tin-foil, and closing circuit through frame K, switch R, to line, thence to magnet D of the distant instrument, thence to ground, and thence to battery F again, so that whenever a space *b'* touches the point C in the transmitter the distant magnet attracts lever B and causes its point C to make a corresponding character on the tin-foil of that cylinder. These characters will be, however, the reverse of those on the transmitter-cylinder, and to make them identical the magnet of the receiving-instrument should be arranged to lift the point C, (instead of pulling it down on the tin-foil,) as shown in Fig. 4, for instance, in which a metal diaphragm forms the armature and carries the point C; or, instead of changing the position of the magnet, the modified form of Morse register, Fig. 5, may be used. In this connection I find it appropriate to describe what I conceive to be one of the most valuable and distinctive features of my invention, and that is its convenience and efficacy for repeating messages.

In the description of the operation of the devices in Fig. 1, where the instrument on the left has been considered the transmitter and the one on the right the receiver, it will be perceived that the message received on such instrument is in such shape that it in turn can become the transmitter to a third station without removal of the tin-foil or any other adjustment than the making of the necessary connections and the retraversing of the record by the stylus adjusted to a higher position, and so the message may be repeated indefinitely through any number of stations without an expert. This practical advantage cannot be made available where the message of automatic transmission is received on a chemically-prepared paper, because the latter cannot become a transmitting-slip, nor can it be made available with an embossed tape from a Morse register without special additional appliances.

One other use of my invention is for multiplying messages for different lines from the manipulation of a single key. To explain how this may be accomplished, the two instruments shown in Fig. 1 may be made to separately make their messages and transmit them to different points. For this purpose the key L is to be considered, and the ground-connections N N' are out. Switches P and M are closed and R is opened. By the manipulation of the key L, then, the current from the battery flows only through the two magnets D D, and the two armatures B and points C are simultaneously actuated to form the message on the tin-foil of the two instruments, and after this is done these two instruments may be separately connected to their independent lines and their separate currents then made and broken through the indented tin-foil jackets and points C, as hereinbefore described. As a matter of course any number of instruments may thus be acted upon by the same key L, and any number of multiplications of a message made to different points.

Figs. 1 and 4 show two forms of my invention, and in Fig. 7 appears still another modification. In this case a standard carrying the

electro-magnet and stylus is made adjustable to or from the cylinder by set-screws *f g*, *f* serving to limit the approach of the stylus to the cylinder, while *g* affords means for quickly moving the standard with electro-magnet and stylus back when the cylinder is to be run back to start the transmission of the message. The stylus or point C is in this case fixed to a very light hinged lever, B′, bearing an armature and working between the magnet and the cylinder, permitting the use of an ordinary Morse register for receiving in a manner as has been described with reference to Fig. 4.

I will now describe the means for clearing the line of static charge or preventing "tailings," which is a serious drawback in rapid transmission. For this purpose I employ a well-known method—namely, a current of reversed polarity, which is alternately thrown on the line. I arrange it, however, in connection with the other parts of my invention, in a manner which secures some important and useful features.

In constructing the cylinder I do not make a single continuous spiral groove in the periphery of the same, but use two parallel grooves, side by side, and employ two styluses, one of which styluses, working in one groove, sends the main impulses over the line, and the other of which alternately throws a current of reversed polarity over the line to clear the static charge.

Referring to Fig. 8, I′ is the cylinder with its jacket of tin-foil, and C′ C² are the two styluses on the ends of levers B′ B², and resting side by side in the two separate parallel grooves of the cylinder, which two grooves it will be understood traverse the periphery of the cylinder spirally side by side. One of the styluses, C², is arranged to be lifted by magnet D′, and the other is arranged to be depressed by the magnet D² by the same current passing through each, the said magnets being arranged on opposite sides of the levers carrying said styluses. To one of the styluses, C², is connected the positive pole of a battery of, say, fifty cups, and the other is connected to the negative pole of a battery of, say, ten cups, and the other poles of said batteries connect with the ground. Now, in preparing a message on the tin-foil of the cylinder I′, the key L′, it will be seen, causes the two styluses to produce exactly reversed characters on the tin-foil of the cylinder, and when this message is to be sent the key L² is opened. Then as the cylinder I′ revolves, the stylus on the right throws impulses to the line through key L² from the main battery of fifty cups, and the instant a break is made by that stylus contact is made with the other, and a current of reversed polarity from the battery of ten cups is thrown upon the line and secures the clearing of the same of tailings or the static charge.

Having thus described my invention, what I claim as new is—

1. In an automatic telegraph, the combination, with an indentable metal foil having characters indented therein, of a stylus disposed upon the side of the foil upon which said indentations were made, and arranged, as described, to break contact over the indentations and make contact on the intervening spaces lying in the normal plane of the foil, substantially as described.

2. As an improvement in the art of automatic telegraphy, the method of recording and transmitting messages, which consists in producing intermittent linear indentations representing characters in a metal foil or strip of conducting material, and then causing said indentations to successively interrupt, and the intermissions or intervening spaces in the foil to successively close an electric circuit, substantially as described.

3. A cylinder having a rotary movement with two grooves on its periphery traversing the same in parallel position, in combination with a tin-foil covering two styluses arranged to act in said grooves alternately, and two batteries connected with the two styluses for reversed currents for the purpose of following each character-impulse with an electric impulse of reversed polarity to clear the line of tailings or static charges, as set forth.

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Witnesses:
SOLON C. KEMON,
AMOS W. HART.

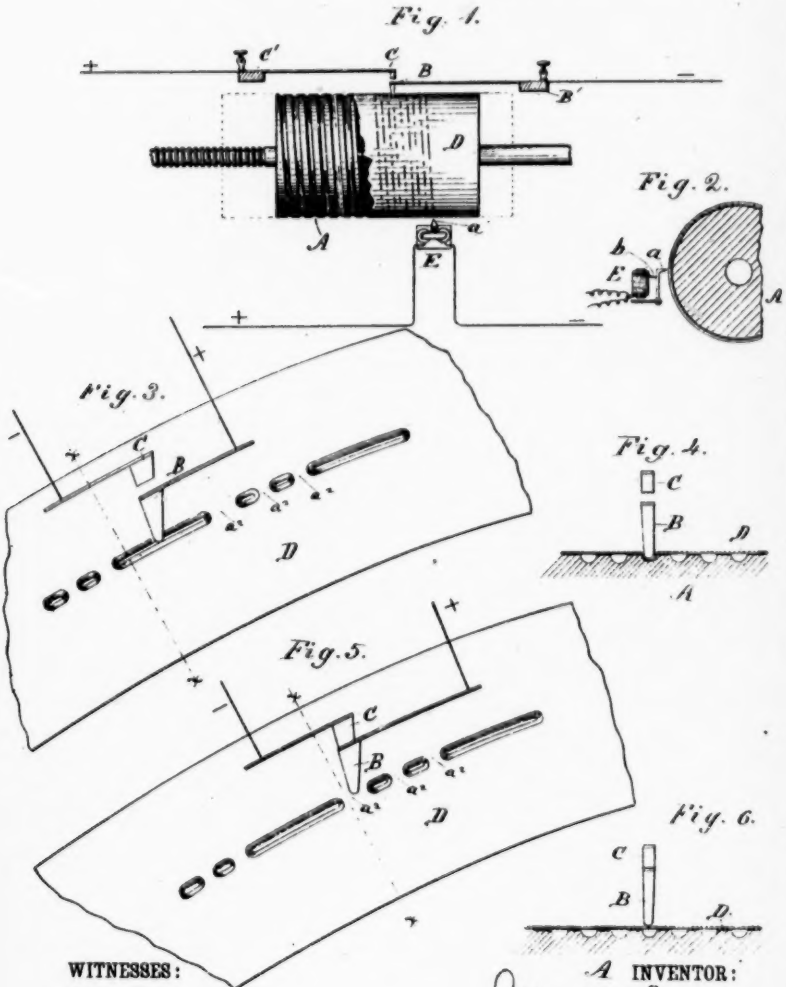
363
(No Model.)

2 Sheets—Sheet 1.

J. W. ROGERS.

AUTOMATIC TELEGRAPH.

No. 283,665. Patented Aug. 21, 1883.



WITNESSES:

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ATTORNEYS.

364

(No Model.)

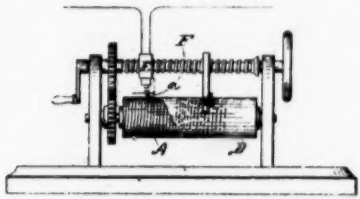
2 Sheets—Sheet 2.

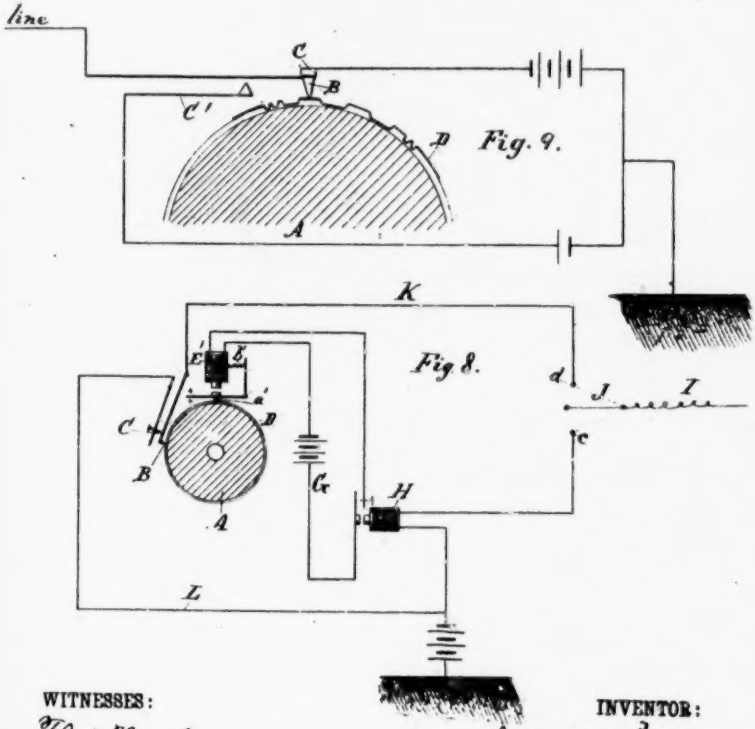
J. W. ROGERS.

AUTOMATIC TELEGRAPH.

No. 283,665. Patented Aug. 21, 1883.

Fig. 7.





WITNESSES:

Thos. Houghton.

Edw. C. Byrn

INVENTOR:

J. Webb Rogers

BY Munn & Co

ATTORNEYS.

UNITED STATES PATENT OFFICE.

JAMES WEBB ROGERS, OF NEW YORK, N. Y.

AUTOMATIC TELEGRAPH.

SPECIFICATION forming part of Letters Patent No. 283,665, dated August 21, 1883.

Application filed May 3, 1883. (No model.)

To all whom it may concern:

Be it known that I, JAMES WEBB ROGERS, of New York, in the county of New York and State of New York, have invented a new and useful Improvement in Automatic Telegraphs; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side view of the cylinder with a portion of the indented jacket broken away, and showing the position of the indenting-relay and the traversing stylus. Fig. 2 is a cross-section of the cylinder, showing the relation of the indenting-relay thereto. Figs. 3 and 5 are exaggerated views in perspective, showing how the circuit is made and broken by the indentations and alternating spaces. Figs. 4 and 6 are cross-sections, Fig. 4 being taken through line *x x* of Fig. 3, and Fig. 6 being through line *x x* of Fig. 5. Fig. 7 is a side view of a modification of my invention. Fig. 8 shows a diagram of circuits for the same, and Fig. 9 shows means for avoiding tailings or static change on the line.

My invention relates to an automatic telegraph designed for rapid transmission and easy repetition of messages. It is founded upon the following general principles of construction, which are already known and made use of, viz: an indented fillet or sheet of paper or other non-conducting material, which, when passed under a movable terminal of an electric circuit, is made to actuate mechanically the said terminal to alternate contact and separation from the other terminal as the indentations successively pass under the movable terminal for the purpose of alternately opening and closing an electric circuit.

My invention consists in the combination of a spirally-grooved cylinder having a rotary motion, a jacket or strip of paper or other indentable material having indented characters therein and wrapped around said cylinder, and two terminals of an electric circuit, one of which is movable and is actuated to intermittent contact with the other terminal by traveling on the normal or plane surface of the paper, and separates from the other terminal by falling into the indentation in said strip of paper, the traverse of the groove by the movable terminal being effected either by the endwise movement of the cylinder or the movement of the terminals parallel to the axis of the cylinder, as hereinafter fully described.

In Fig. 1 of the drawings, A represents a cylinder having on its periphery a spiral groove, and having upon one of its journals a spiral thread of a pitch exactly equal to that of the spiral groove on the periphery of the cylinder, so that when the journal of the cylinder is fitted in an interiorly-threaded bearing and the cylinder is turned the cylinder has an endwise progressive movement in a right line, so that a relatively-stationary stylus on the periphery of the cylinder is made to traverse the groove therein.

B is a stylus, which is sustained by a spring mounted on the fixed support B′, and C is a stationary anvil attached to a spring immediately above the stylus, and mounted upon a fixed support, C′. This stylus and anvil constitute the two terminals of an electric circuit, as shown.

D is a jacket, sheet, or strip of paper, or other indentable non-conducting material, which is simply fastened about the periphery of the cylinder. This jacket is indented into the groove of the cylinder with Morse characters, by means of an indenting-point, *a*, worked by a relay, E, the said point being mounted upon one arm of an elbow-lever, as in Fig. 2, while the other arm carries the armature of the relay, and the relay serving to throw the point against the periphery of the cylinder, while a spring, *b*, withdraws it therefrom. This relay is worked by a Morse key in an independent circuit.

Now, for recording a message on the paper jacket and transmitting it the following is the method of working: The circuit of the relay is made and broken by the key in the usual way, either close at hand or at a remote point, and the relay is made to project the point against the paper jacket of the cylinder in accordance therewith, and as the cylinder rotates its groove in passing under the point of the relay permits the latter to indent a spiral row of Morse characters in the said paper

around the cylinder. Then, after the record has been thus made on the cylinder, the latter is run back, so that the beginning of the row of characters is under the stylus B, and the cylinder being now rotated and progressively moved under the stylus, the alternate indentation and intervening flat spaces cause the stylus to be alternately projected into contact with the anvil C of the other terminal, thus making and breaking the circuit in accordance with the record made. Thus, when the stylus drops down into an indentation, as in Figs. 3 and 4, the stylus B leaves the anvil C and breaks the circuit, and when the stylus rides up on the space intervening between the indentations and lying in the normal plane of the paper strip or jacket, as in Figs. 5 and 6, the stylus B is projected into contact with the anvil and completes the circuit.

This apparatus permits a message to be made and then transmitted without removing the paper from the place where its message is recorded, and makes a very desirable form of repeater, as the message recorded on the cylinder A may be received by the relay E from a distant station, and then, when transmitted through the stylus and anvil B and C, is sent to another distant station in an easy and practical manner, without mistake and without the aid of an expert.

In Figs. 7 and 8 is shown another form of my invention, in which the cylinder does not have an endwise motion, but simply revolves, while the relay with indenting-point and the transmitting-stylus and its anvil have a right-line movement parallel to the axis of the cylinder in traversing the groove of the same. For this purpose the indenting-relay and the transmitting-stylus are hung upon a screw-threaded counter-shaft, F, arranged parallel to the axis of the cylinder, and the screw-threads of which counter-shaft have such pitch that when the cylinder and counter-shaft are geared together by wheels, as shown, the rate of rectilinear progression of the relay and the stylus on the counter-shaft is exactly the same as that of the groove of the cylinder, so that when the cylinder revolves the stylus will traverse the groove from end to end. In this modification the indenting-point a' of the relay is forced inwardly to the cylinder by the spring b', and is drawn away from it by the relay, which is here shown in a local circuit, G, closed by the relay H. The main line I is also provided with a switch, J, which, when thrown on the point c, causes the main-line impulses to pass through relay H to ground, and by closing the local circuit operate the indenting-relay E. When the switch J is resting on the point d, relay H is cut out and the instrument is ready for transmitting, and as the cylinder revolves the stylus B, rising and falling in response to the indentation, alternately makes and breaks the circuit between I K B and C L.

Now, I am aware that it is not new to cause indentations in a piece of paper to actuate a movable terminal to intermittent contact with another terminal when said paper was disposed as a flat plane and the indentations were arranged as a volute-spiral. On the other hand, I am aware that a spirally-grooved cylinder has been provided with an indented tin-foil jacket, in which the tin-foil formed one of the terminals of the electric circuit. The objection to the first arrangement is that a volute spiral lying in the same plane makes a constantly-varying rate of travel, which is overcome in a spirally-grooved cylinder, and the distinction with respect to the second arrangement disclaimed is that when indented tin-foil constitutes one of the terminals the transmitting-stylus has to be carried with very great accuracy to prevent it from touching either the bottom or sides of the indentations, whereas with my invention, where a non-conducting sheet is used, the stylus may continually bear upon the paper and touch the sides and bottom of the indentations without risk of making a closure of the circuit.

Another advantage of my invention is (see Figs. 5 and 6) that when the stylus B is projected up to contact with the anvil C considerable lifting effect is required, and it will be seen that this lift is effected by the straight or plane surface of the paper at a^2 a^3, which paper is distended over a groove, as in Fig. 6, like a miniature suspension-bridge, and this lifting action is much more positive than would be obtained from an embossment, which, being narrow, would be crushed down by the weight of the stylus and the tension of its spring, and fail to make electrical contact above.

It is obvious that instead of using a non-conducting jacket for the cylinder a jacket of conducting material might be used, since its only function is a mechanical one, and not that of conduction.

For preventing induction on the lines or avoiding tailings or static change, currents of reversed polarity may be thrown upon the line alternately with the main impulses, as has been heretofore done. Thus, in Fig. 9, the stylus B, when elevated by the spaces between the indentations, makes contact with the terminal C of main battery, and when an indentation comes under the stylus the latter drops away from contact with C and makes contact with C', which is the terminal of a smaller battery of reversed polarity.

In defining my invention more clearly with respect to Edison's Patent No. 213,554, I would state that in the latter the modification referring to the use of a cylinder is substantially different from my construction, in that the cylinder is grooved longitudinally and not spirally, as in mine, and the cylinder is not the permanent carrier of the paper jacket, but the paper simply passes over the same tangentially from a separate roll. I therefore confine this part of my invention to the spirally-grooved cylinder and the permanent periph-

eral indentable jacket, in which the paper or indentable covering is not required to be removed from the cylinder between the time of making the record and transmitting it and the registration of the indented record with the subjacent grooves is preserved with accuracy and with the expenditure of no skill or labor.

With respect to the method of transmitting the electric impulses, Edison's tracer or stylus lifts the spring and breaks circuit when the tracer is passing over the surface of the paper not indented. In my method just the reverse takes place—i. e., the tracer or stylus makes or completes the circuit when the tracer or stylus is on the portion of the paper not indented. When the tracer, stylus, or movable terminal makes contact by descending into the grooves and striking against the other subjacent terminal, the said movable terminal must have an invariable or uniform and definite range of movement in descending in order to strike the subjacent terminal, and sometimes the movable terminal or stylus will (by wedging against the sides of the grooves or indentations in the paper when they are not wide enough, or striking against the bottom when they are not deep enough) fail to have that range of downward movement necessary to bring it into certain contact with the lower terminal, and the result is that the circuit is not closed when it should be. It is not possible to guard against this contingency by adjusting the lower terminal to a closer position to the movable terminal, because of the variable character of the grooves or indentations as to width and depth caused by the contraction of the paper after the grooves or indentations are made. Where, however, the circuit is closed by the elevation of the movable terminal against a superposed stationary terminal by the pressure of the non-indented surface or normal plane of the paper, a certain and positive closure of the circuit is obtained, because the normal plane of the paper always projects the movable terminal a fixed, uniform, and determinate distance, and the stationary terminal above may be adjusted to a position that insures contact and the closure of the circuit each time the movable terminal is lifted by the normal plane of the paper. Furthermore, in my case, as the opening of the circuit is made by the initial movement of the movable terminal in falling into the indentation, it matters not, for this action, whether the movable terminal moves a uniform distance or not.

Having thus described my invention, what I claim as new is—

The combination of a cylinder having a spirally-grooved periphery, a jacket having characters indented therein below the normal plane of the jacket, and two terminals of an electric circuit arranged upon the indented side of the jacket, and one of which is made movable and traverses the route of the indentation, the said movable terminal being thrown into contact with the other terminal by the non-indented portion or normal plane of the paper, and the said terminals and cylinder having a motion one over the other, as described.

The above specification of my invention signed by me in the presence of two subscribing witnesses.

JAMES WEBB ROGERS.

Witnesses:
EDW. W. BYRN,
SOLON C. KEMON.

368
(No Model.)

5 Sheets—Sheet 1.

C. C. REYNOLDS.

PHONOGRAPH.

No. 287,166. Patented Oct. 23, 1883.

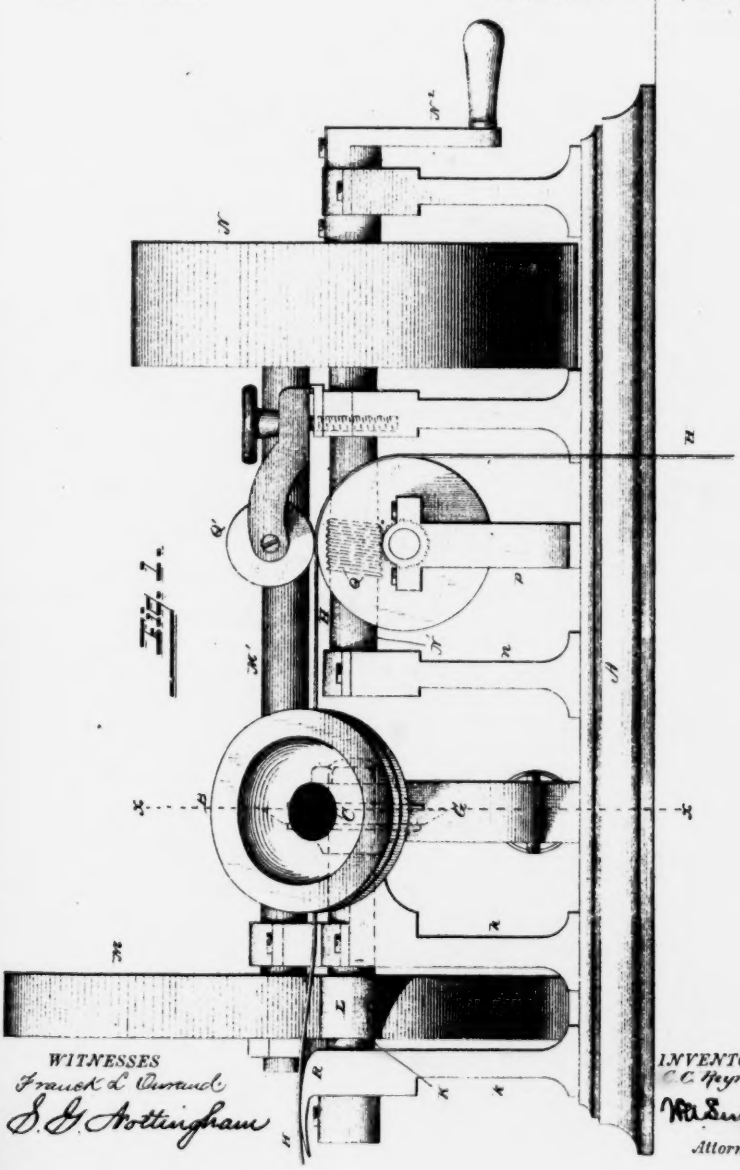


Fig. 1.

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369
(No Model.)

5 Sheets—Sheet 2.

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PHONOGRAPH.

No. 287,166. Patented Oct. 23, 1883.

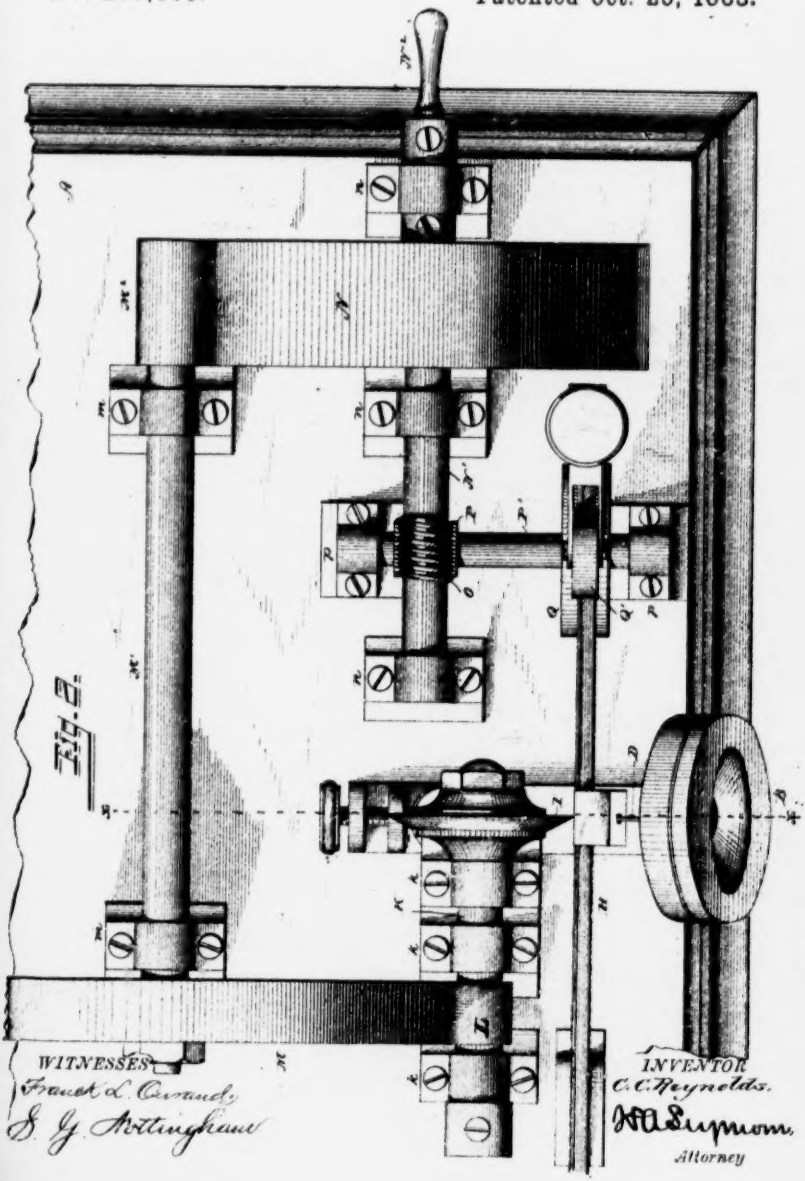

Fig. 2.

WITNESSES
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370
(No Model.)

5 Sheets—Sheet 3.

C. C. REYNOLDS.

PHONOGRAPH.

No. 287,166. Patented Oct. 23, 1883.

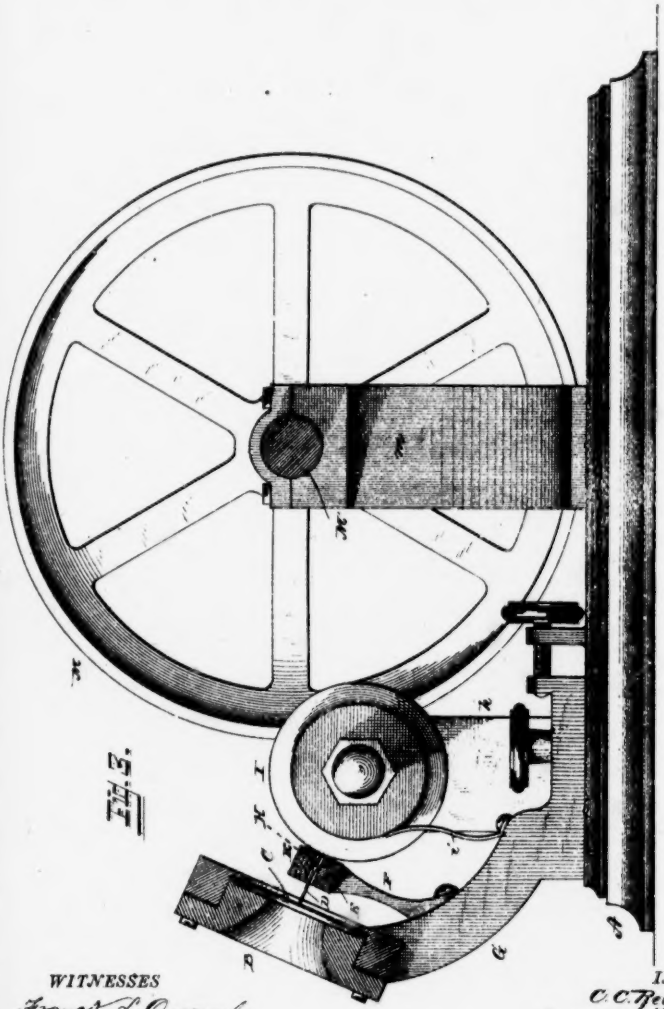

Fig. 2.

WITNESSES
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S. J. Nottingham

INVENTOR
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by A. A. Seymour.
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371
(No Model.)

5 Sheets—Sheet 4.

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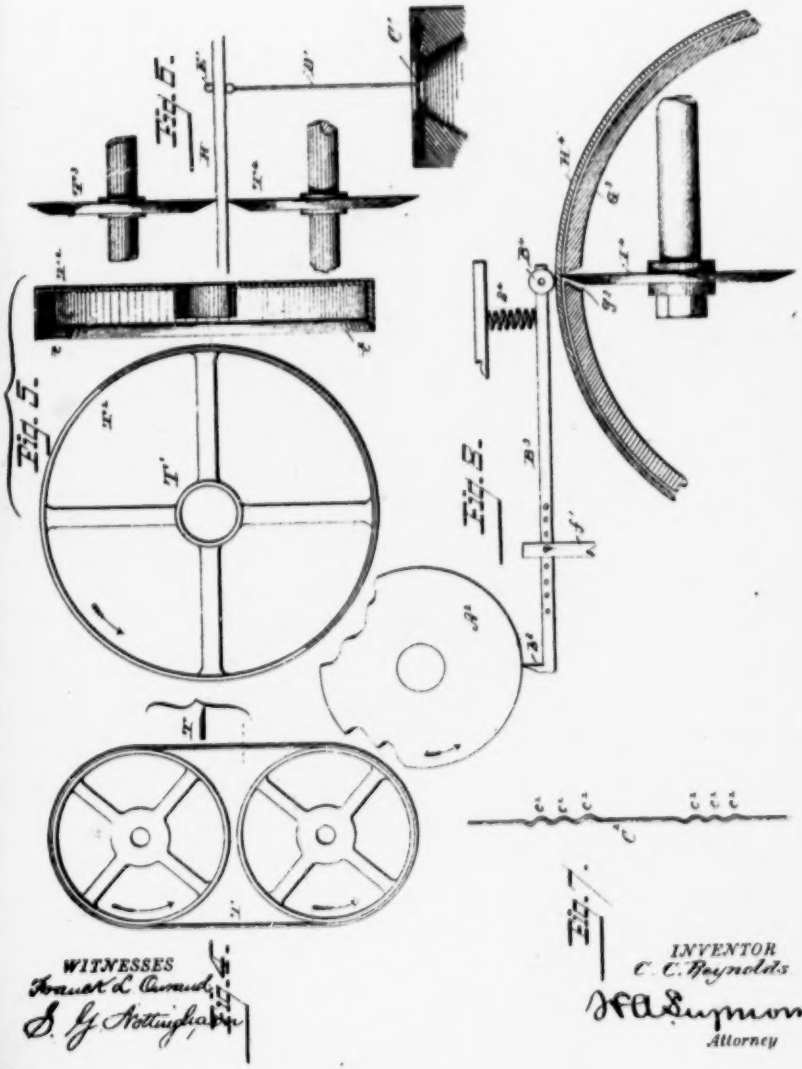
PHONOGRAPH.

No. 287,166.

Patented Oct. 23, 1883.



WITNESSES
Frank L. Ormond
S. G. Nottingham

INVENTOR
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H. A. Seymour
Attorney

372
(No Model.)

5 Sheets—Sheet 5.

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PHONOGRAPH.

No. 287,166. Patented Oct. 23, 1883.

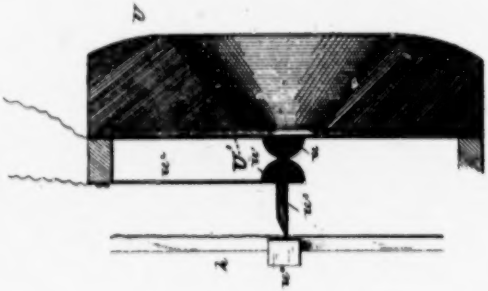


Fig. 9.

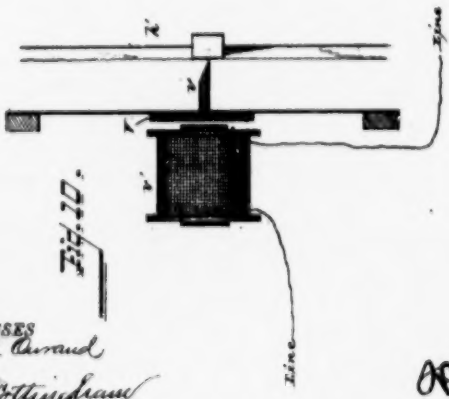


Fig. 10.

Fig. 11.

WITNESSES
Ernest L. Durand
S. G. Nottingham

INVENTOR
C. C. Reynolds.
by A. A. Seymour.
Attorney

UNITED STATES PATENT OFFICE.

CHRISTOPHER C. REYNOLDS, OF PRESCOTT, ARIZONA TERRITORY.

PHONOGRAPH.

SPECIFICATION forming part of Letters Patent No. 287,166, dated October 23, 1883.

Application filed May 26, 1883. (No model.)

To all whom it may concern:

Be it known that I, CHRISTOPHER C. REYNOLDS, of Prescott, in the county of Yavapai and Territory of Arizona, have invented certain new and useful Improvements in Phonographic Instruments; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in phonographic instruments, and methods by which are produced permanent records of sounds in such form that the sounds may be reproduced through the instrumentality of the records.

Instruments of this class as heretofore constructed have produced the sound-record by embossing or indenting a sheet of tin-foil or similar thin and pliable material, which is supported upon a revolving cylinder or plate to receive the action of a recording-stylus, which is forced directly against the sheet by a diaphragm vibrating in response to sounds, the said cylinder or plate being grooved spirally in order to permit the record-sheet to be forced into the groove to raise the record on one side of the sheet, while it is sunken or indented on the other side. The disadvantages of such an instrument are as follows: First, its capacity for continuous recording is limited by the dimensions of the cylinder or plate which supports the record-sheet; second, removing the sheet from its supporting plate or cylinder destroys the perfection of the record, as the embossing becomes more or less disarranged or obliter. d as the thin and soft sheet is subjected to the handling and bending necessarily incident to its removal; third, the embossing is so delicate and fragile that it is distorted by the action of a stylus, with which it is moved in contact for the purpose of reproducing the sounds, and consequently the reproduction is not exact; and, fourth, the resistance which the record-sheet opposes to the recording-stylus prevents the diaphragm from having an amplitude of vibration commensurate with the force of the sound-waves projected against it, and therefore the reproduction will not have the volume or loudness of the original sounds.

It is the object of my invention to provide a phonographic apparatus which is not subject to the disadvantages above enumerated; and to this end it consists in a new method and certain novel constructions and combinations of devices, which will be clearly understood from the following particular description, in connection with the accompanying drawings, in which—

Figure 1 is a side elevation of a phonograph constructed according to my invention. Fig. 2 is a top view thereof. Fig. 3 is a section on the line *x x*, Figs. 1 and 2. Fig. 4 is a view in elevation and diametric section of a modified form of the record-cutter. Fig. 5 is a view in elevation and section of another modification of the record-cutter. Fig. 6 is a plan view of a portion of an instrument adapted to cut the record on both sides of the record-strip. Fig. 7 is a diametric section of a form of diaphragm adapted for use in my improved phonograph. Fig. 8 is a diagram illustrating the construction of an instrument for copying and amplifying an original record made by the old forms of instruments. Fig. 9 is a section of a portion of a telephone-transmitter adapted for transmitting sounds in connection with a record-strip produced by my improved instrument. Fig. 10 is a fragmentary section of another form of telephonic transmitter adapted for operation by the record-strip; and Fig. 11 is a view in cross-section of various forms of strips which may be used to receive the record.

In the drawings, the letter A indicates a base-board, upon which the various parts of my phonograph are mounted.

B is a mouth piece, in which is secured a diaphragm, C, in the manner usual in such instruments, and from the center of this diaphragm projects a stem, D, corresponding to the stylus of the ordinary phonograph. The outer end of this stylus plays between two guides, E E, supported by an arm, F, which projects from the adjustable standard G, which carries the mouth-piece. These guides E are arranged to receive between them the traveling record-strip H, which is guided across the edge of a rotary cutter-plate, I, which is carried by a shaft, K, mounted in bearings at the tops of standards *k*, rising from the base-board. Said shaft has also fixed upon it a friction-

wheel, L, which is driven by a larger friction-wheel, M, carried by a shaft, M', supported by standards *n*, and carrying at its opposite end a friction-pinion, M', which is driven by a main driving friction-wheel, N, carried by a shaft, N', which rotates in bearings on standards *n*. This shaft N' is provided with a worm-gear, *o*, which meshes with a tooth-pinion, P, mounted on a transverse shaft, P', supported by standards *p*, and having fixed upon it a friction feed-wheel, Q, over which passes the record-strip H, said strip being held properly in contact with the periphery of said feed-wheel by means of an adjustable pressure-wheel, Q'.

Near the opposite end of the base-board from the feed-wheel Q, and beyond the guides E E, is a guide, R, which also supports the record-strip and directs it properly between the guides E E. The record-strip, as shown in Fig. 1, is oblong in cross-section, as shown also at H in Fig. 11. It is to be made of a metal which will well support itself and resist ordinary wear—such, for instance, as copper, brass, iron, or soft untempered steel. The dimensions of the strip may be varied; but in practice a strip from one-eighth to three-sixteenths of an inch wide, and from one thirty-second to one-sixteenth of an inch thick, will be found to be of convenient size for general use. It is designed to cut into the edge of this strip indentations or notches corresponding to the record-indentation of the ordinary phonograph, this indented edge to be drawn in contact with a stylus connected with a reproducing-diaphragm in the ordinary manner, and thus reproducing the recorded sounds.

The operation of the apparatus as shown in the drawings will be readily understood. The record-strip H is first passed through the guide R, and then between the guides E in contact with the stem D, and on over the feed-wheel Q and under the pressure-wheel. The strip may be delivered from a suitable reel, (not shown in the drawings,) and after leaving the feed-wheel may be wound upon another reel, or disposed of in any desired manner. The guides and guide-wheel are so arranged that the edge of the strip H will lightly touch the edge of the cutter-wheel I. Now, when the shaft N' is turned by its crank N', motion is transmitted through the friction-wheel N, pinion M', shaft M', friction-wheel M, pinion L, and shaft K to the cutter-wheel I, which has a knife-edge of tempered steel. The relation of the devices for transmitting motion is such that even when the shaft N' is turned comparatively slowly, a very rapid rotary motion will be given to the cutter-wheel. At the same time that motion is being transmitted to the cutter-wheel from shaft N', said shaft also transmits motion through the worm *o*, pinion P, and shaft P' to the feed-wheel Q in the direction indicated by the arrow, and thus, while the cutter-wheel is rotating, the record-strip H is drawn across its edge, and if, while this operation is going on, sounds are produced in front of the diaphragm C, said diaphragm will be caused to vibrate and operate the stem D to drive the record-strip against the cutter-wheel I with a range and force of movement corresponding to the air-vibrations set up by the sounds, and the cutter-wheel will consequently cut notches or indentations into the edge of the record-strip which represent an exact record of such sounds.

It will be readily seen that the cutter-wheel opposes but a slight resistance to the movement of the record-strip, as it is so sharp and its movements so rapid that the edge of the record-strip is easily and rapidly cut away when it is passed against the cutter, even though the strip be of a material and bulk which enable it to sustain a considerable handling and friction when used for reproducing sounds, by drawing its indented edge in contact with a stylus arranged to operate a diaphragm.

It will also be seen that a record of indefinite length may be produced, or short records may be produced in rapid succession, by feeding strips of the desired length to the cutter-wheel.

In order to keep the cutter-wheel clear of particles of metal which might adhere to it, a light spring, *i*, is arranged to bear against each side of said wheel, so as to scrape off the adhering cuttings. This is a great advantage over the old forms of phonographs, in which, as is well known, the extent of the record is limited by the dimensions of the plate or cylinder which supports the foil-strip.

The sounds reproduced by a record-strip formed by my machine approach more nearly the original sounds in loudness and volume than do the sounds reproduced by the old forms of records, as by my improvement so little resistance is opposed to the movement of the strip that the diaphragm has a vibration much more nearly commensurate with the sounds projected against it than is possible when the record must be produced entirely by the force of movement of the diaphragm in driving the stylus against a record-sheet.

The record-cutter need not be limited in form to a simple rotary knife-edged disk. I have contemplated using a cutter operating after the manner of a band-saw, as shown in Fig. 4, in which the letter T indicates a steel band having one of its lateral edges beveled and sharpened to act upon the record-strip.

I may also use a rim-wheel cutter, as shown in Fig. 5, in which the letter T' indicates a spoked wheel having a rim, T', one of the lateral edges of which is beveled to a knife-edge, as shown at *t*.

I may also form the cutter-wheel with cutting-faces, similar to a fine file, to facilitate its cutting and smoothing of the edges of the notches; but such file-faces are not essential.

In Fig. 6 is illustrated a portion of an ir-

strument having two cutters, T' and T', between the edges of which the record-strip H passes, said strip passing also through a guide-eye, E', connected to the stem D', projecting from a diaphragm, C'. In an instrument thus constructed the complete vibration of the diaphragm in both directions is utilized for producing the record, complementary portions of the record being cut in opposite edges of the strip. If such a strip be drawn between a fixed stylus and a movable stylus attached to a reproducing-diaphragm, it is obvious that the two edges of the strip will co-operate in giving the diaphragm vibrations of extensive amplitude, and thus the reproduction of sounds will be very nearly as loud as the original.

In order to give the recording-diaphragm a capacity for free and prompt vibration, I have preferred to form said diaphragm with concentric corrugations, similar to the diaphragms of pressure-gages used for indicating steam-pressure. Such a diaphragm is shown in section in Fig. 7, in which C' indicates the diaphragm, and c' c' c' the corrugations. I have found such a diaphragm very sensitive and efficient in response to sounds.

The essential principle of my improvement may be utilized for reproducing, in durable and amplified form, the fragile records made by the old styles of phonographs. In the diagram Fig. 8 is illustrated the embodiment of my improvement in an apparatus for this purpose. The letter A' designates a cylinder which may be arranged to travel longitudinally, as well as to rotate in a manner similar to that of the cylinder of the old styles of phonographs. B' is a lever provided with a stylus, b', for acting upon an old record-sheet, which may be placed upon this cylinder. Said lever has an adjustable fulcrum, f', and at the end opposite the stylus carries a pressure-roller, B'. The letter G' indicates a supporting-table, against which the roller B' will be pressed by a spring, s'. This table has an opening at g', through which plays the edge of a cutter-wheel, I', which may be given a rotary motion by any suitable means. The letter H' indicates a record-strip, which may be drawn under the wheel B' and across the edge of the cutter-wheel, and if, while the said strip is so drawn, the cylinder A' be rotated, the record-strip thereon will vibrate the lever B' and cause the roller B' to press the record-strip in contact with the edge of the cutter-wheel with a varying pressure corresponding to the indentations of the record-sheet, which will be thus copied and given the form of a continuous strip. It is obvious that the copy may be much amplified by regulating the position of the adjustable fulcrum, so that the wheel B' will be carried by a long arm having any desired proportion to a shorter arm of the lever B', which carries the stylus.

The record-strips produced by my improved machine are peculiarly applicable for use in transmitting messages by telephone—as, for instance, should a person desiring to transmit a telephonic message be unable to send his message immediately and have no time to wait, he may prepare a record or message strip by one of my phonographs, and the telephonic operator may use the strip in transmitting the message at a future time, or in its regular order with other messages waiting until the line can be used.

In Fig. 9 the letter U indicates a portion of a telephonic transmitter which may be used for transmitting messages either directly by the voice or through the instrumentality of a record-strip. The letter U' indicates a diaphragm arranged in the mouth-piece in the usual manner, and provided on its rear surface with a carbon button, u, which is in contact with another carbon button, u', carried by a spring, s^2. The carbon button u' has projecting from its rear side a stylus, u^2, behind which is a guide, u^3, for a record-strip, h. The diaphragm U and the spring s^2 are supposed to be connected with the primary circuit of an induction-coil in the usual manner. It is not necessary to explain the manner of transmitting directly by the voice; but in case a record-strip, as shown at h, is to be used, such strip is drawn through the guide u^3, with its indented or record edge in contact with the tip of the stylus u^2, and will vibrate said stylus longitudinally, so that the pressure between the buttons u and u' will be varied in correspondence with the indentations of the strip, and thus the current varied in a manner to transmit the message represented by the strip.

In Fig. 10 is illustrated another form of transmitter, in which an armature, V, is provided with a stylus, v, to receive the action of a record-strip, as shown at h', so that said armature will be vibrated in front of the core of an electro-magnet, V', and induced undulatory currents be thus set up in the coil of the magnet in correspondence with the record, such induced currents traversing a line-wire and acting upon a receiver in the usual manner.

As before stated, the record-strip may be given various forms in cross-section—such, for instance, as illustrated in Fig. 11. H indicates the flat strip, oblong in cross-section, and with rectangular edges. H' is a strip triangular in cross-section. H² is a round strip. H³ is a flat strip having double-beveled edges, and H⁴ is a strip having sharp ribs to receive the action of the cutter. These strips may be made of any of the metals hereinbefore mentioned, or any durable material which will withstand the frictional wear and handling incident to their use. It will sometimes be found of advantage to make the record-strip of soft steel and temper or harden it after the record has been cut. Such a strip will obviously be extremely durable.

Having now fully described my invention and explained the operation thereof, I wish it to be understood that I do not confine myself to the precise details of construction shown in

my drawings and heretofore particularly described, but may vary the same in any manner for the better carrying out the essential principles of my improvement.

What I claim is—

1. In a phonograph, the combination, with means for moving a record-strip by sound, of one or more moving cutters arranged to act upon said strip, substantially as described, and for the purpose set forth.

2. In a phonograph, the combination, with the diaphragm and the moving cutter arranged to act upon a strip vibrated by said diaphragm, of feeding mechanism adapted to move a record-strip across the edge of the cutter, substantially as described.

3. In a phonograph, the combination, with the diaphragm and two moving cutters, of feeding mechanism adapted to move a continuous strip between said cutters, and intermediate devices for transmitting a vibratory motion to said strip from the diaphragm, so that the opposite edges of said strip will be alternately pressed against the cutters, respectively.

4. A phonograph-record consisting of a metallic strip having record-indentations of varying character representing sound-wave caused by articulate speech cut through one or more of its edges, substantially as described.

5. The herein-described method of preparing phonographic records, the same consisting in vibrating a record-strip by sounds and causing said strip to be cut during and in proportion to its vibration by a cutting-instrument operated independently of the diaphragm, substantially as described.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

CHRISTOPHER COLUMBUS REYNOLDS.

Witnesses:

GEO. W. CURTIS,

WILLIAM WILKERSON.

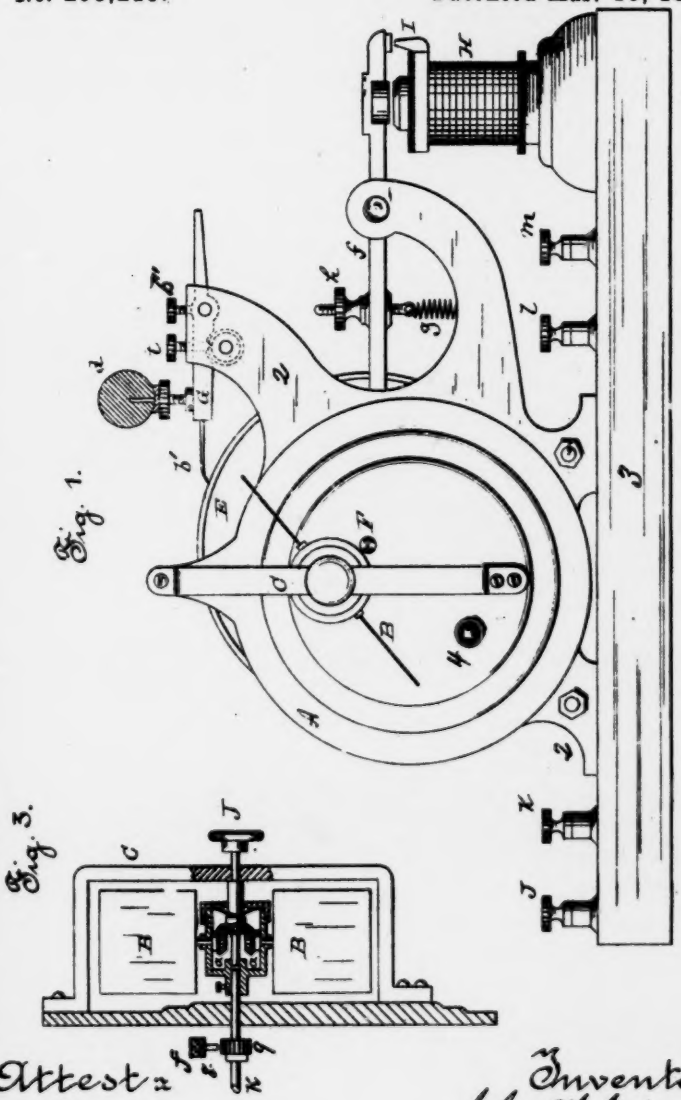
377
(No Model.)

4 Sheets—Sheet 1.

J. ABSTERDAM.

AUTOMATIC AND FAC SIMILE TELEGRAPH.

No. 295,219. Patented Mar. 18, 1884.



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378
(No Model.)

4 Sheets—Sheet 2.

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AUTOMATIC AND FAC SIMILE TELEGRAPH.

No. 295,219. Patented Mar. 18, 1884.

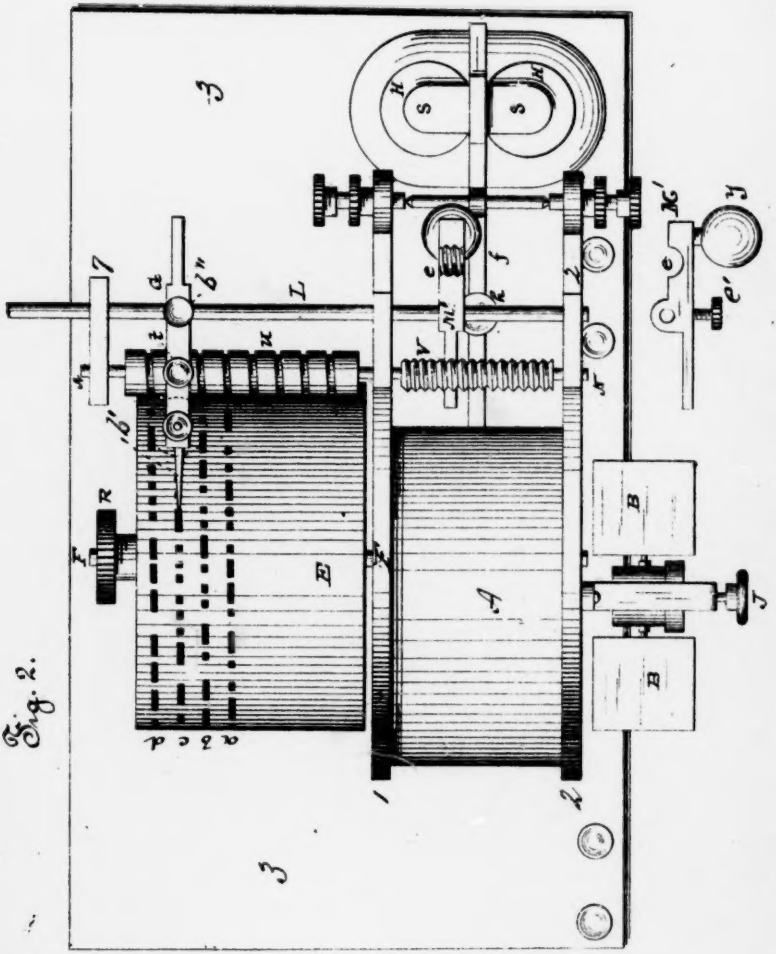

Fig. 2.

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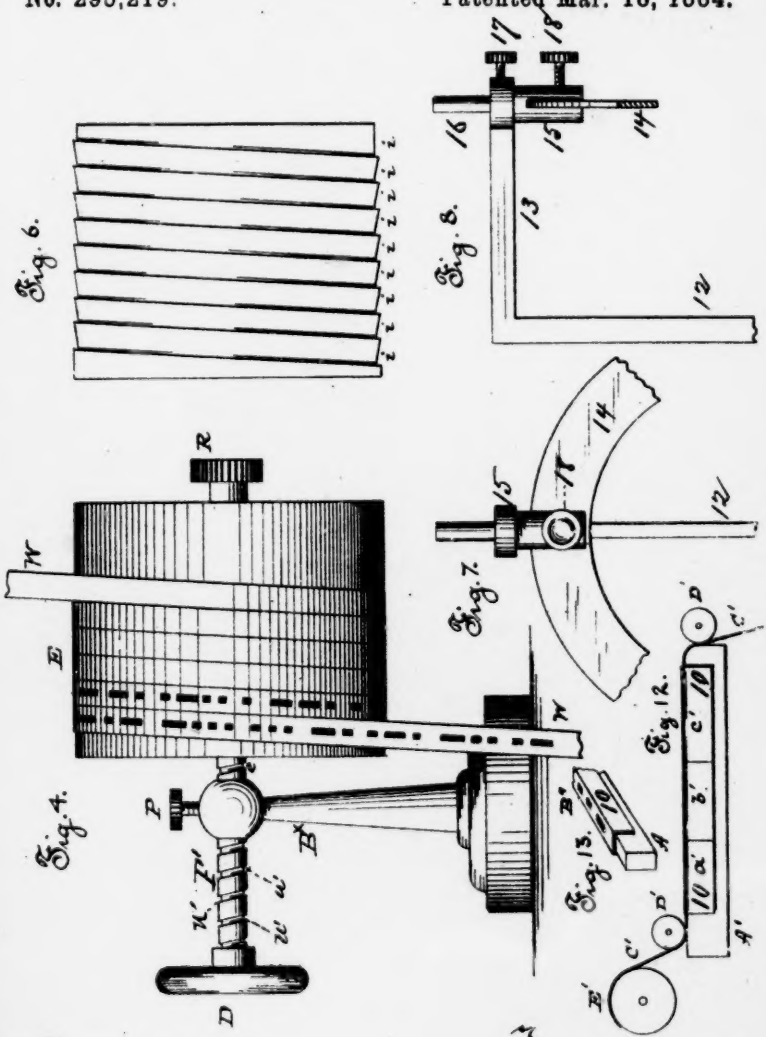
(No Model.)

4 Sheets—Sheet 3.

J. ABSTERDAM.

AUTOMATIC AND FAC SIMILE TELEGRAPH.

No. 295,219. Patented Mar. 18, 1884.



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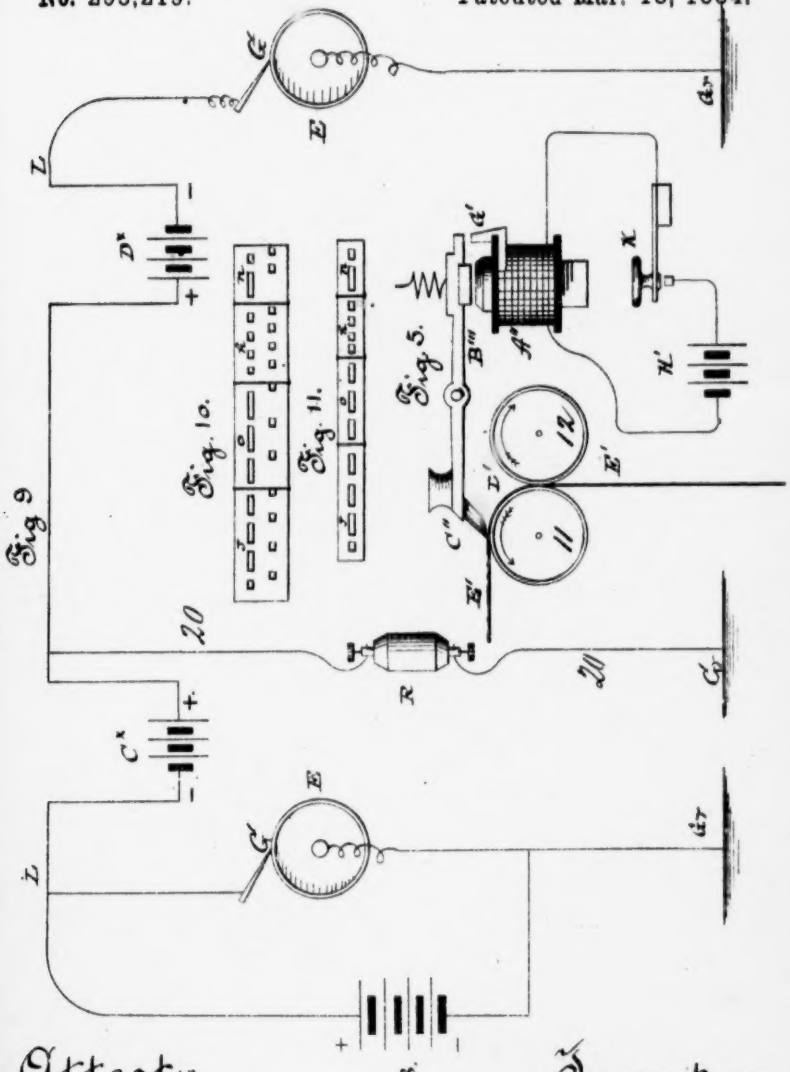
(No Model.) 380

4 Sheets—Sheet 4.

J. ABSTERDAM.

AUTOMATIC AND FAC SIMILE TELEGRAPH.

No. 295,219. Patented Mar. 18, 1884.



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UNITED STATES PATENT OFFICE.

JOHN ABSTERDAM, OF NEW YORK, N. Y.

AUTOMATIC AND FAC-SIMILE TELEGRAPH.

SPECIFICATION forming part of Letters Patent No. 295,219, dated March 18, 1884.

Application filed April 18, 1883. (No model.)

To all whom it may concern:

Be it known that I, JOHN ABSTERDAM, of New York, in the county of New York and State of New York, have invented a new and useful Improvement in Automatic and Fac-Simile Telegraphy; and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

My invention relates, generally, to improvements in that branch of telegraphy known as "automatic"—that is, wherein the mere transmission of the impulses necessary to indicate the message is not sent by hand, but the message is "composed" in or on some material or base, and the composed message is used to automatically control the apparatus transmitting the necessary impulses.

It more especially relates to improved, simple, and reliable means and methods for "composing" the message, means for transmitting the composed message, and to arrangements of circuits and batteries specially adapted to this class of telegraphy; and it consists in the features more particularly hereinafter described and claimed.

In carrying my invention into effect, I use as the base upon which the message is composed a perfectly smooth metallic cylinder or drum adapted to be placed upon or removed from a shaft, upon or with which it receives a rotary motion from any suitable prime motor, an adjustable fan-regulator being connected to the train, so that the speed of rotation of the cylinder or drum can be regulated and controlled.

For regular telegraphic transmission by any arbitrary code, the message-symbols are to be placed or composed upon the cylinder or drum in a regular spiral or winding line thereabout, with insulating material, either the insulated or the uninsulated portions representing the symbols, as may be desired. The spiral line of symbols may be placed upon the cylinder or drum in either of several ways. A paper fillet may be perforated in any well-known way, and the perforated band wound spirally around the cylinder or drum, and the surface then brushed over with the insulating ink or paint, the fillet serving as a stencil, so that when removed from the cylinder or drum the symbols appear thereon by the ink or paint reaching its surface through the perforations. If this system of stenciling be used, it is advantageous to use a blade which is an annulus whose interior diameter is that of the cylinder or drum adjustably mounted in a standard, the interior edge being then used to hold the perforated paper firmly on the drum or cylinder while the stenciling is in progress; or, upon a fillet of paper, the symbols may be marked in an ink or pigment which is both insulating and transferable, which strip of paper is then wound tightly upon the drum or cylinder, and the ink or pigment therefore transferred to its surface by the use of the proper dampness and pressure, or such other process as may be best adapted therefor. This strip of paper may be prepared for transfer by the use of stencils—that is, a set of stencils, each representing an arbitrary telegraph-symbol, is provided, each stencil being bent or hooked at each end, so that a number of them may be joined together to form a word or message. So joined together, they are laid upon the fillet and held thereon by suitable means, whereupon they are used as stencils to suitably mark the paper; or upon the free end of what would ordinarily form the pen or stylus of a Morse register may be mounted a broad-nibbed fountain or magazine or stylographic pen filled with the proper ink, the action of which would be to mark the symbols in broad dots and dashes of the insulating and transferable ink, instead of embossing the paper, as usual. Fillets or bands or sheets of paper prepared in either of these ways may be used as the agent for transferring the message to the face of the drum or cylinder. Instead, however, of transferring the symbols or matter to be transmitted to the surface of the drum, the strip itself may be wound thereon, it first having been prepared by any of the means noted—that is, with the matter stenciled thereon, or imposed by the register noted, or in any other suitable way. When the strip itself is used and wound around the drum or cylinder,

the ink to be used is preferably one not affected by water, either a fatty ink or a varnish not soluble in water, and properly colored, if desired, in order that it may show on the surface of the paper. A strip or fillet prepared with such an ink or varnish is saturated with water, the surplus water squeezed out in any suitable way—say by passing it through an ordinary wringer—and the strip or fillet then wound spirally around the drum or cylinder, with the symbols thereon uppermost. The web portion of the fillet or band becomes, through the agency of the moisture, conducting, while the fatty ink or the varnish forms insulating spaces, and the current through the transmitting device is thereby controlled.

If desired, in order to render it of greater conductivity, the water used to moisten the strip may be acidulated or impregnated with metallic salts in a manner well known in the art; or the symbols may be placed in a merely insulating ink on a metallized paper strip—that is, on paper having one side coated with a conducting metal—or even upon a metal foil. Such a strip is then wound on the drum or cylinder, its ends being fastened thereto by metal clips or by pasting, or in any other way which will securely hold it thereto. In this latter case any non-conducting ink will answer.

In order to facilitate the placing of the symbols in a regular spiral around and upon its face, the drum or cylinder may be provided with a fine spiral mark, engraved or cut therearound; or its face may be formed into a beveled spiral showing in cross-section a series of beveled grooves, the bottom of each being at a shoulder or wall rising to the top of the next; or the drum or cylinder may be placed upon a shaft capable of rotation in a suitable standard. This shaft is twice or more as long as is needed for the support of the drum or cylinder, and the part upon which the drum or cylinder does not rest is cut into a screw-thread of pitch corresponding to the pitch of the spiral upon the drum or cylinder. Into this screw-thread, through the box in which the shaft revolves, takes a pin or point. It follows, then, that if the drum or cylinder be rotated, and the fillet or other device used for placing the symbols thereon be fed thereto or used therewith at one point, a true spiral will be formed on the face of the drum or cylinder as it is moved forward during rotation by the action of the pin or point and screw-threaded shaft. I prefer a device of this kind for preparing the drums or cylinders for the work of transmission, instead of using one machine for both preparation and transmission, as thereby the more complicated and expensive transmitting machinery is left free to be employed at any time for its own uses.

The transmitting device consists of any suitable prime motor, suitably inclosed, gearing with and giving motion to a projecting shaft, upon and with which the drum or cylinder, prepared as hereinbefore specified, may be mounted and rotated. To this motor or some part of its train is connected a regulating-fan, the blades of which are adjustably connected to their shaft, so that their angle, and hence their resistance to rotation, may be varied or adjusted at will, whereby at will the speed of rotation of the shaft and the drum or cylinder placed thereon is regulated and controlled.

In the framing of the machine is mounted a rod capable of longitudinal movement in its bearings in the framing in a direction at right angles to the axis of rotation. Upon this rod is secured, so as to take upon the drum or cylinder, when desired, a stylus or pen. In the framing there has also its bearings a shaft, which receives a rotary motion by gearing connecting it with the prime motor of the transmitter. This shaft should be of twice the length of the cylinder or drum, and in that portion immediately adjacent thereto is screw-threaded, and with a pitch corresponding to the pitch of the spiral line of symbols upon the drum or cylinder. A pin, preferably a screw-point, passes through the body of the pen or stylus referred to and takes into such screw-thread. The result is that as both drum or cylinder and this shaft are rotated the pen or stylus passes across the face of the drum or cylinder, passing over the line of symbols thereon, and, if the proper line and battery connections be made, breaking and making or controlling the circuit in accordance therewith.

Thus far what may be termed a "merely automatic system of preparation and transmission" has been described. I have united therewith, however, means for using at will such a system, or a system of pure fac simile telegraphy.

The screw-threaded shaft referred to is, in the portion thereof not adjacent to the drum or cylinder, screw-threaded with a much finer pitch—indeed, a very fine pitch. Upon the longitudinally-moving shaft referred to there is mounted what may be called a "guide," capable of movement thereon, but also of being fastened thereto. It has formed upon its under side a half-nut, adapted, when thrown in proper position, to take into and be guided by the fine screw-thread noted. If, now, that be placed upon the drum or cylinder which it is desired to transmit in fac-simile, this guide is moved to its initial point, thrown into contact with the screw-threaded shaft, and fastened to the longitudinally-moving rod. The pen or stylus is fastened to the rod, but its pin or screw-point released from taking in the coarser screw-thread. Thereupon the pen or stylus is caused to traverse the drum or cylinder in a spiral of exceedingly-fine pitch, corresponding to the pitch of the finer screw-thread, making and breaking the circuit so often as to cause at the receiving end the re-

ception in fine parallel lines of a fac-simile of the message upon the transmitting drum or cylinder.

As this mechanism may be used for either transmitting or receiving, it is well to add to it a magnetic stop in the well-known manner of the Morse register—simply a magnet, the free end of whose armature takes into some part of the motor-train, and thereby stops it when the magnet is unchanged. The first make of the circuit or charging of the magnet, however, causes the attraction of the armature, releasing the train, while the resilience of the retractor of the armature and the magnetic force of the magnet are so adjusted relatively to each other that the magnet does not become sufficiently demagnetized to let go of the armature and cause a stoppage during the rapid pulsations used in automatic or fac-simile telegraphy.

The instrument thus far described has been described as a transmitter only. It may be used, however, as a receiver as well, and, in fact, in practice it is desirable to so use it. When used as a receiver, a strip of paper chemically prepared with any of the well-known solutions for that purpose is wound spirally around the drum; or a sheet of paper prepared in the same way may be fastened thereto. So prepared, the drum or cylinder may be rotated at a high rate of speed, avoiding the danger of breaking or tearing the fillet or band, which danger is always present when the fillet or band is merely passed between rollers or between a drum or roller and a stylus or pen. The stylus, in such case, is made merely as a fine metal point, in most cases of iron or steel, but varying as to material as the chemical composition of the material used with the receiving-paper varies.

In the exceedingly rapid work expected of these branches of telegraphy, if the circuit were absolutely made and broken as rapidly as the stylus can pass over the conducting and non-conducting portions of the drum or cylinder, a blurring of the received record would occur, due to prolongation of effect, caused by the extra or induced or earth currents in the wire itself. To obviate this, it is best to use an arrangement of circuits and batteries somewhat as follows: At each end of the line is placed a small battery, the two being connected to line, so as to neutralize, and the circuit being normally closed. At the transmitting end a third or main battery, more powerful than either of the other two, is connected to line around the transmitter, and in such manner that the transmitter forms a shunt-circuit away from the line for this battery, one end of this battery being connected both to the stylus and the line, and the other end of such battery having a connection to the ground and the drum, so that the connection between the battery and drum, when the stylus is on a conducting-space of the drum, forms the shunt-circuit, short-circuiting this battery from the line. When, then, the stylus is in contact with the metal surface of the drum or cylinder, a short-circuit for the main battery is established, so that it does not flow to line, while the two batteries directly in line neutralize each other. If, however, the electrical contact of the stylus and drum or cylinder is broken, the short-circuit of the main battery is broken and it is thrown to line. The two lesser batteries, though neutralizing each other, keep the line in a state of electrification, so to speak, and ready to be affected by any variation of potential at either end, while the circuit of the main battery never being broken, the current thereof being simply transferred from the shunt to the main circuit, or vice versa, sparks and extra currents are largely avoided.

In order to more completely avoid any effects of any extra induced or earth currents, one or more connections may be made from the line to the ground through large resistance—that is, through a resistance which the ordinary working-current would not overcome, but which the high-tension currents—such as are the extra or induced currents—would overcome.

By the means thus generally described I am able to furnish an exceedingly simple and reliable system of automatic telegraphy, uniting in one instrument capacity for code or fac-simile transmission, and requiring the least possible amount of skilled labor in its operation. In fact, by the use of the stencils noted, messages may be prepared at business houses or offices and sent to the telegraph-office ready to be transferred to the drum; or, as the drums are preferably prepared separately from the transmitting apparatus and then placed thereon, the drum itself may be fully prepared for transmitting by the customer and then sent to the operating-office.

It should have been noted that in preparing the messages a series or number of drums may be used, it being preferable that the drums or cylinders be prepared first and then placed in the transmitting apparatus. The preferable drum or cylinder is one made of zinc, and upon it the spiral guide-line before alluded to may be made with muriate of platina, which, in conjunction with zinc, gives a readily visible black mark. This process keeps smooth the surface of the drum and gives the needed indication without any indentation thereof.

It is preferable to coat the drums or cylinders used for receiving with a tinned surface, deposited thereon in any of the known methods of tinning, as tin withstands the corroding influences of the chemicals used and the current better than most, if not all, the commercially-practicable metals. These lines may be placed in a spiral for automatic transmission of code-signals or in straight lines for fac-simile or autographic transmission.

It may be noted, also, that the sources of current for the operation of the line may be dynamic or mechanical generators of current, instead of the batteries shown, the relations between the various generators or sources of

current used being preserved, as before noted. In fact, the various chemical, mechanical, and electrical conditions noted may be varied without departing from the spirit of the invention as hereinafter claimed. Several matters are herein shown or described not claimed herein, and no claim thereto is herein made because proper claim thereto has been made in a prior application or will be made in proper subsequent applications.

Convenient devices and arrangements for carrying my invention into practice are illustrated in the drawings, in which—

Figure 1 is a side and Fig. 2 a top view of the transmitter. Fig. 3 is a side view, partly in section, showing the arrangement for adjusting the blades of the fan-regulator. Fig. 4 is a side elevation of the device for supporting the drum while the latter is being prepared to control transmission. Fig. 5 is a side view, partly diagrammatic, of a device for preparing the transfer-paper by means of a pen. Fig. 6 is a view of a form of drum or cylinder which may be used in lieu of the drum shown in Fig. 4. Fig. 7 is a front and Fig. 8 a side view of a device for retaining the paper-fillet in position for stenciling on the cylinder or drum during stenciling. Fig. 9 is a diagram of the circuit and battery connection referred to. Fig. 10 and 11 are top views of the stencil-plates referred to, while Figs. 12 and 13 show convenient ways of using them.

In Figs. 1 and 2 of these drawings, which show the transmitter itself proper, 3 is any suitable base, on which are supported the framings 1 2, rising therefrom, between which is placed the casing A, containing the gearing or gearing and motive power for giving motion to the drum or cylinder E. While the motive power may be of any desired kind, it is here represented as a spring-power inclosed within A and having winding-place 4. Beyond the framing 1 extends a shaft, F, connected to and rotated by the gearing within A, upon which is to be placed the drum or cylinder E, which may be secured thereon so as to rotate therewith by the jam-nut P.

Upon a shaft, K, connected to the gearing within A so as to rotate therewith, and within a supporting-frame, C, attached to A, are secured fan-blades B B, rotated through the medium of bevel-gears *a a*, meshing with a bevel-gear and controlled by the thumb-piece J. By this arrangement the inclination or angle of the fan-blades B B to the plane of rotation may be varied, and hence the speed of rotation of them, the connected gearing, and the cylinder or drum E controlled and regulated.

Upon the cylinder E a representation of the matter to be transmitted is placed in alternate conducting and non-conducting spaces. These representations may be in the ordinary signs of any written language, or they may be, as shown in Fig. 2, the arbitrary or conventional signs of a telegraph-code. In the latter case they are to be laid around the drum or cylinder in a spiral line, as shown at *a b c d*, and by method and means to be hereinafter explained.

Supported by the framings 1 2 and a standard, 7, and capable of longitudinal movement in its bearings therein, is a rod, L, upon which is carried a stylus-holder, G, having a binding-screw, *b''*, adapted to fasten it to L. In the same framings, and between L and E, is supported a shaft, N, having gearings (not here shown) connecting it to the motor actuating E, so as to rotate proportionately therewith. Upon it is cut a screw-thread, *u*, of a pitch corresponding to the pitch of the spiral *a b c d* on E. Through G passes a screw or point taking into *u*. It follows, then, if the motor be allowed to act, that E and N will be rotated, and that the stylus-point *b'*, attached to G, will be carried across the face of the drum or cylinder, passing over the lines *a b c d*, and making and breaking circuit accordingly, if E and G be properly connected in circuit. The other extreme, however, of the shaft N is provided with a screw-thread, V, of much finer pitch than *u*—in fact, it should be of exceedingly fine pitch. Opposite it upon the rod L is what may be termed a "guide," M', having a screw, *e'*, to secure it, when desired, to L, but loose thereon when not secured by *e'*.

M' has formed in it a half-nut, *e*, adapted to take on the thread V. When the telegraphic symbols shown are to be transmitted, the screw *e'* is turned to loosen M' from L, and M' is thrown over from contact with V, as shown. If, however, a message in figure or language signs be placed upon E for fac-simile transmission, *t* is turned so that it does not take in *u*, and G is turned to secure G to L, at the same time M' is thrown over so that *e* takes on V and M' is fastened by *e'* to L, which, as before stated, is capable of longitudinal movement in its bearings. The parts being thus arranged, if the motor be started by the action of V *e* L G, the stylus *b'* is caused to traverse the face of E in a spiral of fine pitch corresponding to V, controlling the circuit accordingly. Thus I am enabled to furnish one instrument adapted to transmit at will either arbitrary telegraphic symbols or fac-simile or autographic messages.

In the circuit controlled by E and G is placed a magnet, H, having an armature-lever, *f*, and a back-stop, I, limiting its play. The lever *f* is provided with the usual retractor, *h g*, and its outer or free end is adapted and arranged, by a hook or stop, 8, when the lever is controlled by *g*, to take into a wheel, 9, of the motor-train, so as to stop or block the motor. The strength of H and *g* are so adjusted, however, relatively to each other that if H be overcharged, releasing, through *f* and 8, the motor-train, its residual magnetism will hold *f* during the rapid makes and breaks incident to automatic or fac-simile telegraphy.

It should have been noted before that by the adjustment of the regulator-fan blades B B the speed of the transmitter may be changed. In fac-simile telegraphy they may be so set as to allow the drum or cylinder to rotate much

faster than when it is used in ordinary automatic telegraphy. At the same time, if it be desired to prepare the drum while in the transmitter, they may be set so that its speed of rotation shall correspond with the speed of operation.

In order to give both G and M′ firm contacts with E and A, respectively, preventing any jumping or skipping, weights *d y* are provided. These weights may be applied as clearly shown in Fig. 1, where *d* is the weight applied to a projection, either screw-threaded or plain, from the body of the stylus-carrier G. This weight is so adjusted that it holds the pen or stylus firmly to the face of the drum or cylinder and obviates any liability to jump from the face or surface on which the end may rest.

The drum or cylinder for automatic transmission shown in Fig. 2 may be prepared in either of several ways. A strip or fillet of paper may be perforated to represent, either by the perforations or by the spaces between the perforations, any telegraphic code, and this by any of the well-known forms of perforators, as shown in Fig. 4. The strip so perforated is wound spirally around the drum or cylinder and used as a stencil for imprinting thereon marks or symbols corresponding to the perforations; or the strip or fillet of paper may be marked with an insulating and transferable ink or pigment in symbols representing a code, which strip or fillet may then be wound around the drum or cylinder and so treated that the ink or pigment is transferred from the fillet or band of paper to the surface of the drum or cylinder. A convenient means for accomplishing this is shown in Fig. 5, wherein 11 and 12 are rolls actuated to feed between them the strip, band, or fillet E′, while A″, B‴, H′, and K represent the ordinary construction of a Morse register. Upon the armature-lever B‴ is mounted a broad-nibbed fountain or reservoir pen, C″, which is lifted from or allowed to contact with E′, according as the circuit of H′ is made or broken by the key K. Instead of this, a set of stencils, each being the arbitrary symbol representing a word or letter in a telegraphic code, may be prepared, the ends of each stencil being bent over, so that a series may be hooked together, as shown in Figs. 10 and 11, wherein stencils representing J O H N are fastened together to form a word or message or part thereof. These stencils may be kept in stock, selected and joined to form the message by either the customer of the telegraph-line or by the employés thereof. They may, if desired, be formed with the shoulders 10. (Shown in Figs. 12 and 13.) Joined together, they are then used as shown in Figs. 12 and 13—that is, the paper band or fillet C′ is drawn over a support, A′, and held in position by rollers or clamps D′ D′, the stencils *a′ b′ c′* laid thereon, and the message stenciled on C′ in transferable insulating ink or pigment, and the strip C′ then used, as before stated, as the means by which the message is transferred to the drum E. By any of these means the drum E may be covered with a series of arbitrary telegraphic symbols in a spiral line. In order, however, to insure the correctness of the spiral line, and in order to at all times leave the transmitting apparatus free for its own particular work, I prefer to prepare the drum apart therefrom and place it in the transmitting apparatus only when fully prepared to control the sequence of makes and breaks necessary for complete and perfect transmission.

This can be accomplished by the use of the devices shown in Fig. 4, in which B‵ is a standard, having its upper end formed into a bearing or box for the shaft F′, which, for about half its distance, is screw-threaded, as shown at *s′*, the pitch of such thread corresponding to that of *s* on N in Fig. 2. A screw or point, P, takes through the journal or box into such screw-thread. Upon the shaft F′ the drum or cylinder is placed, and is secured thereon by the jam-nut R′. The shaft F′ is provided with a pulley or hand-wheel, D‵, by which it may be rotated. If, now, an end of the perforated fillet or band W be secured to E, and E be rotated by D‵, and the fillet or band fed thereto from one point, it is evident that it will be wound thereon in a spiral corresponding to *s* and *s′*. If desired to assist in this, the face of the drum or cylinder may be turned in a beveled spiral, as shown at *i i* in Fig. 6. The latter form affords a sure and simple guide for the spiral line, especially when the stencil-plates shown in Figs. 10 and 11 are used.

In order to retain firmly in place the stencils when in use, whether they be the perforated fillet or the plates, the device shown in Figs. 7 and 8 may be used, wherein 12 is a standard having a projecting right-angled arm, 13, in the end of which is supported, by means of its shank 16, a slotted piece, 15. In the slot of 15 is secured, by means of the set-screw 18, the blade 14, which is an annulus, its interior diameter being equal to the diameter of the drum or cylinder. The blade is adjusted by the set-screw 17, so as to bear upon the stencil, when placed on the drum or cylinder, and so hold it firmly while it is being brushed over.

By the means described, the drum or cylinder may be readily and reliably prepared to control automatically the transmission of the desired matter, and that with a minimum of skilled labor.

For transmission, the arrangement of circuits, batteries, and instruments shown in Fig. 9 is a desirable one, in which at the receiving and transmitting stations the drums or cylinders E E and pens G G are conventionally represented, the drums or cylinders being connected to the ground Gr, while the styluses or pens are connected to the line. At each end of the line is a weak battery, these batteries being indicated at C‵‵ and D‵‵, of equal strength, and connected oppositely in the circuit, so as normally to neutralize. At the

transmitting-station a stronger and main battery, M B, is connected to line, so as to re-enforce C^5, and to ground around the transmitting apparatus E G. In the line between the stations is made a ground-connection, 20, having in it a rheostat, R, of such resistance as to prevent the ordinary working battery-currents from going to earth. Normally the batteries C^5 D^5 neutralize each other, keeping the line in a neutral state so far as electrical tension is concerned. When the transmitter is used, as the pen G rests on a metallic portion of the drum or cylinder E, the main battery M B is short-circuited. When, however, electrical contact between E and G is broken by an insulating-space, the short-circuit of M B is broken and its current is forced to line and distant station, to complete its circuit. As its circuit is never broken, but merely changed, the danger of false marks from prolongation of discharge is largely obviated, while the resistance-leak 20 and R (of which there may be any desired number in the circuit) affords a short path to ground for any extra or induced currents, so that they are not compelled to pass through and affect the receiving-instrument.

I do not herein claim, broadly, a method of automatic transmission consisting in causing the ordinary symbols of a telegraph-code to be recorded in insulating and conducting spaces upon a suitable surface, and then using the record so made to automatically control the transmitting-circuit; nor the combination, with one transmitting-surface, of a motive power and a regulator adapted to vary and control the speed of movement of such transmitting-surface, and means for controlling the regulator at will, as such subjects-matter of invention form the subject of a prior application, bearing serial number 88,352; but,

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In an automatic-telegraph transmitter, the combination of a drum or cylinder having symbols thereon in non-conducting matter in a spiral line, and representing a telegraphic code or signals, a stylus, and means, substantially as described, for causing the stylus to contact with the drum or cylinder when in operation and take upon the drum and the lines of non-conducting symbols, substantially as set forth.

2. In an automatic-telegraph transmitter, the combination of a pen or stylus, a drum or cylinder having thereon symbols of non-conducting material in a spiral line therearound, and means for rotating such drum or cylinder, and means for causing the pen or stylus to traverse the drum or cylinder in a spiral line, substantially as set forth.

3. In an automatic-telegraph transmitter, a drum or cylinder having a series or number of symbols representing a telegraphic code or alphabet imprinted thereon in non-conducting matter, and in a spiral line therearound, to automatically control the transmission of the electrical impulses necessary for a message, substantially as set forth.

4. In an automatic-telegraph transmitter, the combination of a drum or cylinder, a stylus or pen, and a shaft provided with two different screw-threads and a guide, so that the path of travel of the stylus over the face of the drum or cylinder may be changed, substantially as set forth.

5. In an automatic-telegraphic transmitter having a drum or cylinder prepared in spiral lines of conducting and non-conducting material, to control the transmitting-circuit, the combination, with the drum or cylinder, of a motor giving motion thereto, a vibrating or governing fan for controlling the speed thereof, and means for simultaneously adjusting the position or angles of the vanes of the fan relatively to each other, and locking them positively in such position or relation, so as to readily control and regulate the speed of the motor and of rotation of the drum or cylinder, substantially as set forth.

6. A stencil-plate or series of stencil-plates, each representing an arbitrary telgraph-symbol, and provided with hooked ends adapting them to be joined together to form a message, substantially as set forth.

7. The means for holding the stencil in position upon the face of the drum or cylinder while in use, consisting of an upright and its right-angled arm and an adjustable annulus supported thereby, substantially as set forth.

8. The method of automatic transmission herein described, consisting in causing telegraphic symbols to be recorded upon a drum or cylinder in conducting and non-conducting spaces in a spiral line by transferring or stenciling thereon a suitable ink, paint, or pigment, and then using the record so made to automatically control the transmitting or line circuit, substantially as set forth.

This specification signed and witnessed this 16th day of April, 1883.

JOHN ABSTERDAM.

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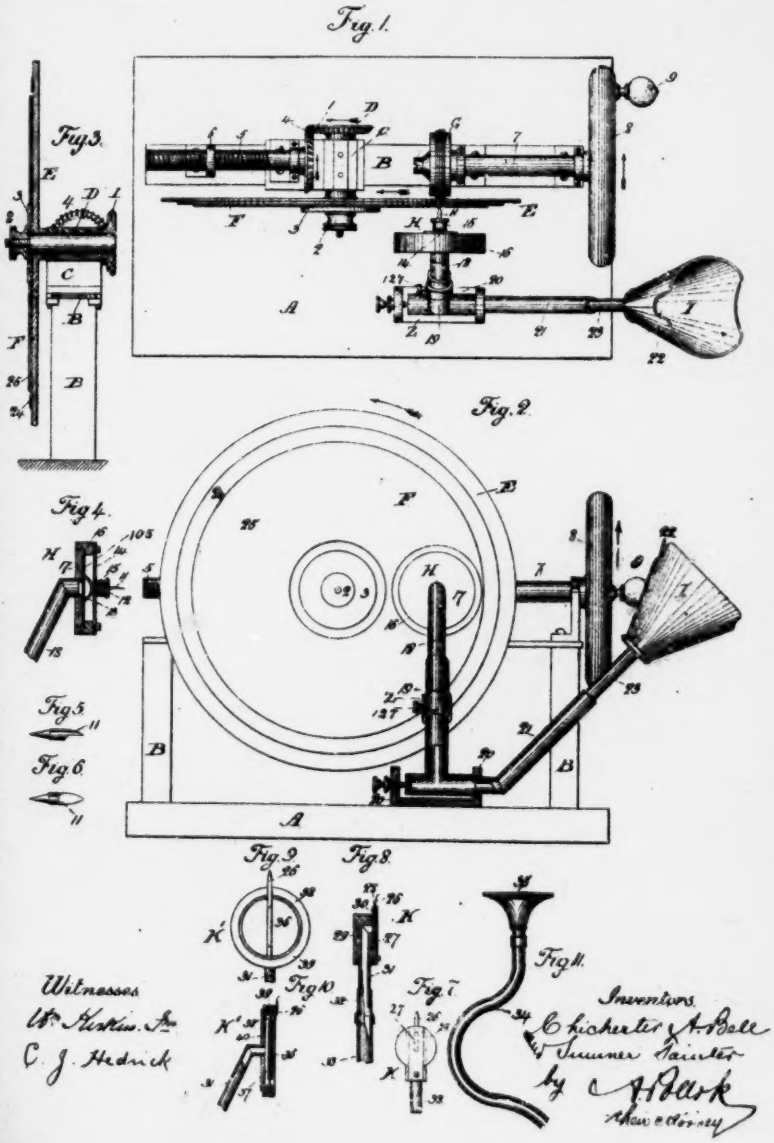
(No Model.)

4 Sheets—Sheet 1.

C. A. BELL & S. TAINTER.

RECORDING AND REPRODUCING SPEECH AND OTHER SOUNDS.

No. 341,214. Patented May 4, 1886.



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388

(No Model.)

4 Sheets—Sheet 2.

C. A. BELL & S. TAINTER.

RECORDING AND REPRODUCING SPEECH AND OTHER SOUNDS.

No. 341,214. Patented May 4, 1886.

Fig. 12

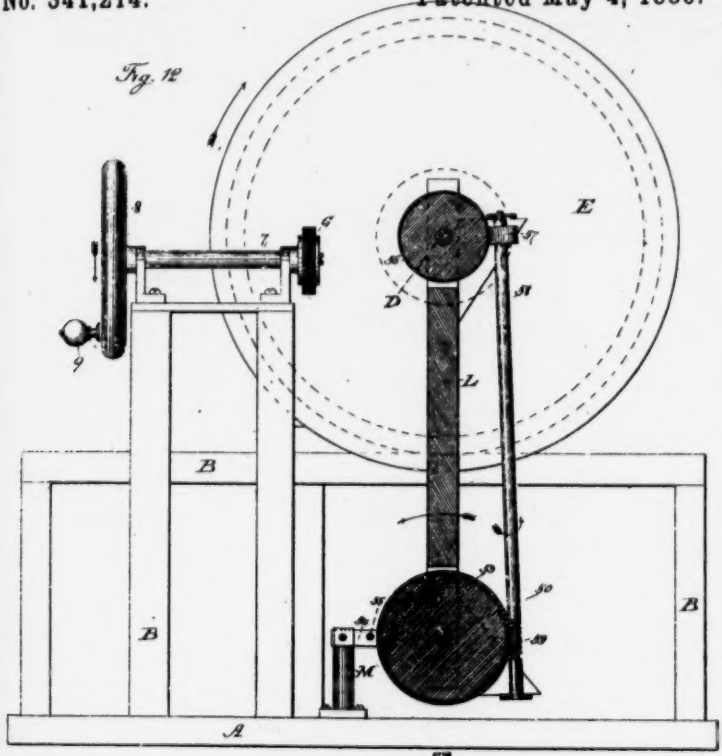
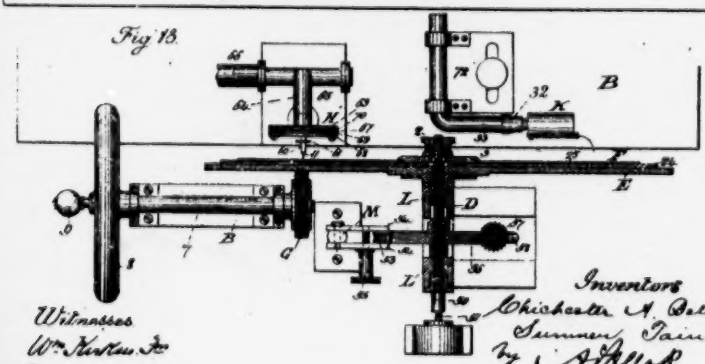


Fig. 13.



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389
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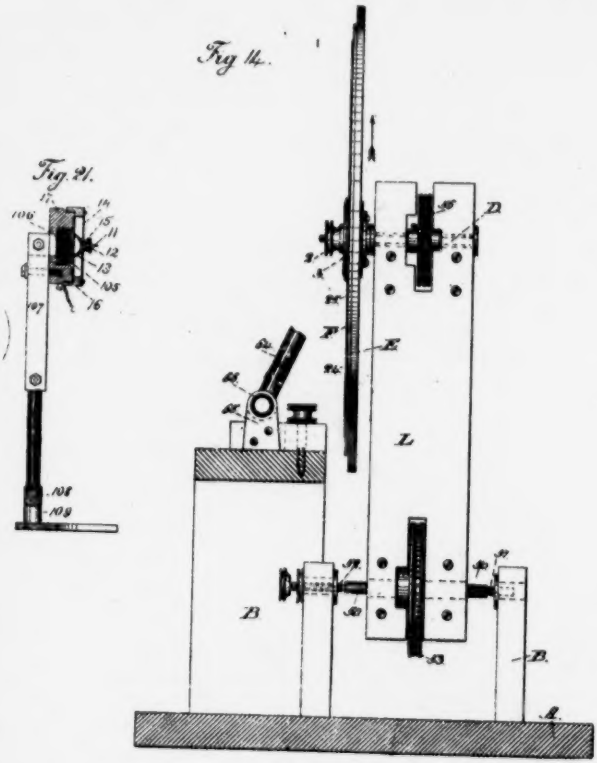
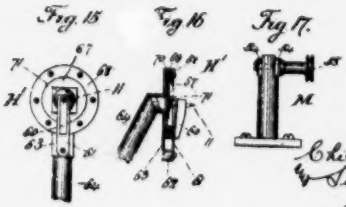
4 Sheets—Sheet 3.

C. A. BELL & S. TAINTER.

RECORDING AND REPRODUCING SPEECH AND OTHER SOUNDS.

No. 341,214. Patented May 4, 1886.





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390
(No Model.)

4 Sheets—Sheet 4.

C. A. BELL & S. TAINTER.

RECORDING AND REPRODUCING SPEECH AND OTHER SOUNDS.

No. 341,214. Patented May 4, 1886.

Fig 18.

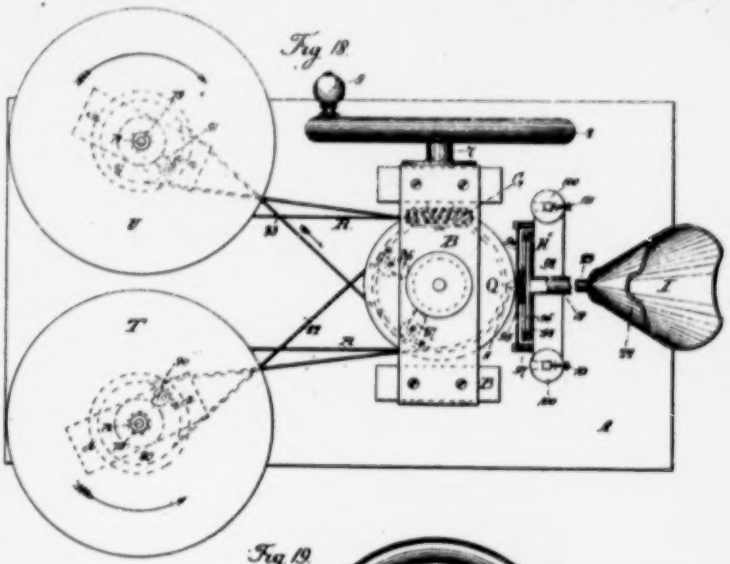


Fig 19.

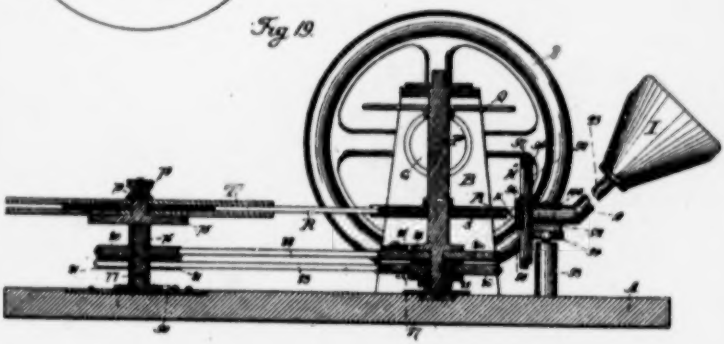
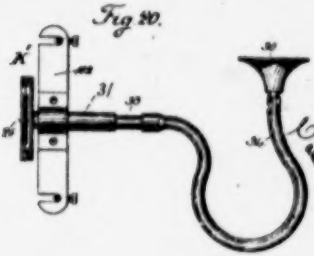


Fig 20.



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UNITED STATES PATENT OFFICE.

CHICHESTER A. BELL AND SUMNER TAINTER, OF WASHINGTON, D. C.

RECORDING AND REPRODUCING SPEECH AND OTHER SOUNDS.

SPECIFICATION forming part of Letters Patent No. 341,214, dated May 4, 1886.

Application filed June 27, 1885. Serial No. 169,041. (No model.)

To all whom it may concern:

Be it known that we, CHICHESTER A. BELL and SUMNER TAINTER, both of Washington, in the District of Columbia, have invented a new and useful Improvement in Recording and Reproducing Speech and other Sounds, which improvement is fully set forth in the following specification.

This invention relates to the formation, in a solid substance, of elevations and depressions, or other inequalities corresponding more or less perfectly to the forms of sound-vibrations, and the reproduction, by means of such inequalities, of the sounds represented by them.

The invention consists, first, in the formation of the record or "phonogram," as it has been called, by means of a cutting-style which is vibrated by the sound-waves or sonorous vibrations to be recorded. The vibrations may be impressed upon the style directly by the impact of the sound-waves upon some device mechanically connected with or carried by the cutting-style or its support, or indirectly through the action of an electric current or other suitable vibratory medium. Heretofore a large number of contrivances have been devised for converting electrical impulses into mechanical vibrations, and they could, of course, be used for vibrating the cutting-style. Otherwise they have no relation to this part of the present invention, the essential new feature of which is the removal of material to form the record by a cutting, gouging, or graving action of the vibrating style. Heretofore the vibrating style has, as in Edison's well-known phonograph, simply indented the recording material. It has been proposed to cut the record in the edge of a strip of metal or other solid material by vibrating the strip in contact with the cutting-edge of a rotary disk cutter; but this proposal is essentially different from this invention, the new mode being applicable to cutting the record upon all sorts of surfaces, and not upon strips only, and is, besides, believed to be later in time than this invention. Under this part of the invention are included the vibratory cutting-style as a new device in a sound-recorder, and the combination of the same with other devices; also the cut or engraved record itself. In this new or improved form of record not only may a larger number of words or sounds be recorded in a given surface than has been practicable with the indented records heretofore in use, but the recorded vibrations are also sharper and better defined. It is found that an indenting style smooths over the crests of the larger elevations, and also rubs out some of the finer ones.

The invention consists, secondly, in engraving or cutting the record in a waxy or amorphous, and slightly cohesive substance. Preferably, a compound of beeswax and paraffine (the latter in excess) is employed. This compound has no tendency to clog the style, but is readily removed thereby in chips or shavings. This part of the invention also consists in a recording material composed of a wax or waxy surface on a paper or pasteboard foundation. Heretofore it has been proposed to use soft paper saturated or coated with paraffine as the material for recording by the indenting method; but its use does not appear to have been successful, and an outer layer of tin-foil was therefore employed to receive the indentations.

The invention consists, thirdly, in cutting or engraving the record in the form of a groove with sloping walls, the sound-waves being represented by elevations and depressions at the bottom of the groove or otherwise. The advantage of this form of record is that it forms an efficient guide to the reproducing-style.

The invention consists, fourthly, in loosely mounting the reproducing-style so that it can readily be guided by the record. Preferably the reproducing-style, or rather what may be called the "head" of the reproducing instrument is mounted on an universal joint, and the style is pressed against the record by the yielding pressure of a spring or weight. Practically in the instruments made by us the pressure is due to the weight of the instrument, modified by the elasticity of a section of soft-rubber tube, which supports the same and constitutes a universal joint; but evidently there are many devices which can be used to mount the reproducer, so that it is free to follow the sound record or phonogram, and which, therefore, would be within the spirit of the invention. The reproducing-style, mounted as just explained, is specially adapted for use in connection with a record in the form of a groove with sloping walls, and this

combination is specially claimed; but it may also be usefully employed in connection with other forms of record.

The invention consists, fifthly, in reproducing directly from the wax record. It is found that such a record has sufficient strength to withstand the rubbing action of the reproducing-style, so that a considerable number of reproductions can be obtained from it. The smoothness of the wax gives it a great advantage in this regard. So far as we are aware, no one has reproduced sounds from a wax record by rubbing a style or reproducer over it.

The invention consists, sixthly, in a reproducer or reproducing instrument in which the reproducing-style, instead of being placed behind its support, projects at the point beyond the edge thereof. One practical advantage of this is that it enables the position of the style on the record or phonogram readily to be observed.

The invention consists, seventhly, in cutting the sound-record in a fusible material, (the waxy compound before referred to, for example,) and then melting the surface slightly, so as to remove any roughness left by the cutting-style. These roughnesses are altogether outside of the sound-vibrations, and give rise in reproducing to scraping noises, which interfere with the intelligibility of the sounds reproduced. These scraping noises are greater with some other modes of reproducing which we have devised, and which will form the subject of other patents, than they are with a rubbing style; but even with the latter the additional smoothness given to the surface by the partial fusion has some advantage.

The invention consists, eighthly, in a sound-recorder having a cutting or graving style which is held by elastic or yielding pressure against the surface on which the record is to be made. The object is to enable the vibratory graver or cutting style to ride over instead of plowing through any elevations on the recording-surface. The depth to which the point of the cutting-style is embedded in the record affects the amplitude of the style's vibration. By this improvement the depth is kept uniform, notwithstanding any slight unevenness of the recording-surface.

The invention consists, ninthly, in having the recorder, of whatever description, or the reproducer, or both, rest against the tablet or recording material by gravity.

The invention consists, tenthly, in combining, with a sound-recorder or recording-instrument of any suitable description, and specially with one having a cutting-style, a tube or hollow standard on which the recorder is mounted, and through which the sound-waves are conveyed to the same. This part of the invention also consists in supporting this hollow standard on a hinge, and having a sound-conveying tube communicate with the interior thereof through the hinge. This part of the invention further consists in supporting the reproducer or reproducing-instrument on a hollow sound conveying standard, the same as explained with respect to the recorder, and in similarly connecting the hollow standard of the reproducer with an exterior sound-conveying tube.

The invention consists, eleventhly, in combining with the recorder a mouth-piece so shaped as to include the nose of the user. It is found desirable to concentrate the sound-waves as much as possible upon the recording instrument or style, and if an ordinary mouth-piece be used the sound reproduced from the record is imperfect in the nasal elements, and sounds somewhat like the speech of a person with a cold in his head. By the use of the improved mouth-piece this disagreeable quality of the reproduced sound is avoided.

The invention consists, twelfthly, in a reproducer in which the sonorous vibrations impressed by the record upon the style are by the latter communicated to a block, plate, or other body of hard rubber, and through said body are transmitted to the air or to other vibratory medium. It is found that this material (hard rubber) gives much purer sounds than metal and other substances heretofore employed. It appears to absorb minute vibrations which give rise to scratching noises, and also to communicate sonorous vibrations without at the same time adding any foreign vibrations due to the movements of its own particles among themselves. The result is probably due to the high elasticity and the homogeneity of hard rubber.

The invention consists, thirteenthly, in combining with the disk of a recording and reproducing apparatus, in which the record is formed on the face of said disk in a volute or spiral by cutting or otherwise by any known or suitable means mechanism for giving to said disk a uniform surface-speed under the recorder. Heretofore when the record was formed on the face of a disk the latter has been given a uniform rotation, so that the same number of words were recorded in the outermost circles, as in the smaller inner ones. By giving to the disk a uniform surface-speed under the recorder, or by making the times of each rotation inversely proportional to the distance of the recorder from the center of the disk, the record of any given word or sound will be of the same length at whatever part of the disk it may be, and in this way it is possible considerably to increase the number of words or sounds on a given area.

The invention further comprises certain special constructions, combinations, and arrangements of parts, as hereinafter set forth.

Having now explained the principle of the invention, the manner in which the same is or may be applied will now be explained with reference to the accompanying drawings, which make part of this specification.

Figure 1 is a plan view of an apparatus constructed in accordance with the invention, arranged for recording; Figs. 2 and 3, respectively, a front elevation and cross-section of

the same; Fig. 4, a view in section and elevation of the recorder; Figs. 5 and 6, views on an enlarged scale of the graver or cutting style; Figs. 7 and 8, views in elevation and section, respectively, of the reproducer; Figs. 9 and 10, similar views of another form of reproducer, and Fig. 11 an elevation of the sound-conveying tube for use with the reproducer. Figs. 12 to 17 represent a modified form of apparatus, Fig. 12 being a back view, partly in section; Fig. 13, a plan, partly in section; Fig. 14, an edge view, partly in section; Figs. 15 and 16, views in elevation and section of the recorder, and Fig. 17 an edge view of a friction-clamp making part of the apparatus. Figs. 18 and 19 are plan and longitudinal sections, respectively, of a form of apparatus also constructed in accordance with the invention, or with parts thereof in which the record is made on a strip, and Fig. 20 a plan, partly in section, of the reproducer for use with such apparatus. Fig. 21 is a view of a recorder in which the style is operated electrically.

Referring to Figs. 1 to 11, A is the base or bed of the apparatus, and B an upright frame, which carries the mechanism for supporting and moving the tablet F, (shown as a disk,) on which the record is to be or has been formed. In the slide C, movable in ways of the frame B, is journaled an arbor, D, on which are fixed a metal disk, E, at one end and a bevel-gear, 1, at the other. The arbor projects beyond the metal disk E, so as to form a support for the recording-tablet F, which is retained thereon by the nut 2 and washer 3. The metal disk E performs the double function of a friction-wheel and of a backing to the recording-tablet F. The bevel-gear 1 engages a similar gear, 4, on the end of the screw 5, which is journaled in a bearing in the slide C, and is tapped through a stationary lug, 6, on the frame B. As the arbor D is revolved, the screw 5 is turned also, and in consequence of its engagement with the lug 6 it moves the slide C lengthwise of the frame B. The rotation is communicated to the arbor from the shaft 7, journaled in bearings of the frame B, and provided at one end with a fly-wheel, 8, and crank-handle 9, and at the other with a friction-pinion, G. This pinion is formed, as shown, of rubber disks clamped together between metal washers. It bears against the back of metal disk E, and communicates motion to it. As the slide C is moved by the action of the screw 5, the metal disk E is carried past the friction-pinion, so that it touches the metal disk in a spiral line, and serves to give a uniform surface speed to each part of the disk as it in turn comes opposite said pinion. The recorder H is placed on the opposite side of the metal disk E, preferably as shown, with the point of the graver or cutting style 11 directly opposite the point where the pinion G touches the disk E. The said pinion thus acts as a support to the disk against the action of the cutting or recording style. The latter is preferably formed of a round wire by turning the end conical and rounding the extremity, and then grinding off one side to the axis of the wire. This leaves sharp cutting-edges on both sides of the tapering point. These edges remove the material in chips or shavings, like a plane or turning-tool. It is not essential to give this form to the style. Any form which will remove the material and not simply displace it will answer. The style is set in one end of a block, 12, provided on the opposite end with a cup, 13, (see Fig. 4,) and secured in the cross-piece 14 by the nut 15. The cross-piece 14 is fastened to a ring, 16, into which a back plate, 17, is secured. These parts, except the steel style, are preferably of hard rubber, although they could be made of another material—of brass, for example. A sound-conveying tube, 18, is screwed into the back plate, 17, the end being just behind the cup 13. A diaphragm, 105, of any suitable material, whose edges are clamped between the ring 16 and back plate, 17, is placed behind the cup 13, which is pressed against said diaphragm by the elasticity of cross-piece 14. The cup 13 and block 12 serve to communicate the vibrations from the diaphragm to the recording-style.

The tube 18 forms part of a hollow standard, upon which the recorder is mounted. The lower part, 19, of this standard is hinged in the bracket 20, as clearly shown in Fig. 2, so that it can be rocked to bring the recorder into or put it out of action.

On the tube or standard 19 is a ring-weight, Z, which is retained in position by a set-screw, 127. It therefore can be adjusted up or down, in order to increase or diminish the pressure of the style 11 against the tablet F. The use of this weight is desirable, but not necessary.

The tube 21 communicates with the interior of the hollow standard through the hinge, and does not therefore interfere with its freedom of motion. This tube 21 can be fixed in the bracket or can be allowed to turn, as may be preferred.

The mouth-piece I is shaped to fit the face of the user, and is provided with a notch, 22, to receive the nose. It is attached to the tube 23, which at its lower end fits snugly in the tube 21 and communicates through the series of tubes 23, 21, 19, and 18 with the space inside and back of the cup 13.

In operation the recorder rests by its own weight, assisted by the pressure of weight Z, or by its own weight alone, if preferred, against the recording-tablet F, said weight causing the style to embed itself to the proper extent in the recording material. The sonorous vibrations impressed upon the style are so rapid, as well as so minute, that the record is made as perfectly as if the recorder were held positively, while at the same time the recorder can be moved bodily to conform to the unevenness of the surface of the tablet, and thus keep uniform the depth at which the style operates.

The tablet F consists of a paper or pasteboard foundation, 24, with a coating, 25, of

wax. A composition excellently adapted to the purpose, and according to our experience the best, consists of one part, by weight, of white beeswax and two parts of paraffine. The two bodies are melted together, and if not perfectly free from dirt and grit should be filtered. A filtration through cotton-wool will answer. The coating is or may be about one-twentieth of an inch in thickness, (the paper being one-tenth of an inch, more or less,) and can be made by flowing the melted composition over the paper disk or foundation. The surface is preferably turned off flat on a lathe.

In order to place the tablet in the machine, the recorder H is turned back out of the way. When the tablet has been secured in place, the recorder is turned forward into the position shown, the style resting against and slightly penetrating the wax coating. A penetration of one one-hundredth of an inch has been found very effective, the style being formed of No. 16 wire-shaped at the cutting end as in Figs. 5 and 6. Upon turning the fly-wheel 8 the disk E and tablet F will be turned, and the style 11 will cut or engrave a spiral line in the wax coating of the tablet. If one talks into the mouth-piece I, the style will be thrown into vibrations corresponding to the spoken words, and the engraved line will be of varying character, the inequalities or variations from uniformity representing the forms of the sound-waves.

The reproducer K, (shown in Figs. 7 and 8,) for reproducing from the engraved tablet, or from an other suitable record the sounds which formed said records, has a reproducing-style, 26, formed of a narrow metal strip bent near the end, as shown in Fig. 8, and pointed, as shown in Fig. 7. This style is held by cementing, riveting, or otherwise, between the strip 27 and the circular plate 28, both preferably of hard rubber. The strip 27 is fastened at the bottom to an offset on the block 29, in which a passage is formed for the sound-waves. This passage terminates just behind the plate 28. There is a fixed disk, 30, of the same size as the movable plate 28. It is cemented or otherwise fastented on the face of the block, and is perforated at the center, in order not to obstruct the opening therein. The plate 28 is close to but not in contact with the disk. The tube 31, fixed at the upper end to the block 29, is joined at the lower end to the tube 33 by a section of soft flexible vulcanized-rubber tubing, 32. For use the tube 33 is slipped into the tube 19 in the manner shown for the tube 18 of the recorder.

The reproducer K when so placed is mounted upon a hollow standard composed of the tubes or tubing 31, 32, 33, and 19, and in consequence of the flexibility of the rubber tubing 32 it is free to follow the record. No special care is necessary to insure its adjustment, for if the reproducer K be allowed to rest against the record with the style upon the engraved line the style will of itself gravitate to the bottom of the groove.

There exists always a liability to disarrangement in some part of the machine either in the recorder or the support therefor or the recording-tablet or its support, or if there be no disarrangement it would be difficult to insure that the reproducing-style should touch the record precisely at the proper point if the reproducer be held rigidly. Difficulties on these accounts are avoided by the loose or flexible mounting of the reproducer, the style automatically adjusting itself to the proper place on the record. It will be seen that the reproducer is mounted on a universal joint, so that it can move in any direction. The movement parallel with the face of the tablet would, however, by itself allow the style to follow and adjust itself to the record to a useful extent.

In operation the reproducer K is placed against the record, and on turning the wheel 8 in the same direction and at about the same speed that it was turned in recording, the record will move the style 26 and plate 28, so as to throw the air in the hollow standard into vibrations, and produce sound-waves similar to those which originally acted upon the recording-style to make the record. The reproduced sounds are audible by placing the ear in proximity to the mouth-piece I; but it is preferred to withdraw said mouth-piece, and to connect the flexible tube 34 (see Fig. 11) with the tube 21 and listen at the ear-piece 35. After the record has been cut it will of course be understood that the machine is turned back to the starting-point for reproducing. The surface of the cut record can be rendered more smooth by removing the engraved tablet from the machine and exposing the surface to heat—as, for example, by rotating the tablet-face downward over an alcohol-lamp until the surface begins to glisten. Of course a too long exposure would destroy the record. It is the merest surface action that is required. The record can be used for reproducing without submitting it to this operation and without removing it from the machine. It may, however, be removed, and at any time thereafter replaced on the same or a similar machine, and be made to reproduce the original sounds.

The reproducer K′ (shown in Figs. 9 and 10) has the style 26 attached to the outer of two light plates, 36 and 37, which are attached to a diaphragm, 38, of thin sheet rubber clamped at the edges between the ring 39 and the border of the back plate, 40. The tube 31 is fastened in the back plate.

It will be observed that in both forms of reproducer the style 26 projects beyond the edge or end of the instrument, so that the position of its point on the record can be easily seen.

Referring now to Figs. 12 to 17, A is the bed, B an upright frame, D an arbor, E a metal disk, F the tablet, and G a friction-pinion, as in Figs. 1 to 11. The nut 2 and washer 3, the shaft 7, wheel 8, and crank 9, and the paper disk 24 and wax coating 25 are identical with the parts similarly numbered in Figs. 1,

2 and 3. The arbor D, instead of being journaled in a slide, is carried by an arm, L, which is supported by and is fixed on the short shaft 50. This shaft is supported on centers 51 and 52, so that the arm L can be rocked. The worm-wheel 53, loosely mounted on the shaft 50, is held stationary by the clamp M, the jaws 54 fitting on either side of the wheel, and being pressed against it by the thumb-screw 55. The arbor D carries a screw-wheel, 56, which engages the worm-pinion 57 at the upper end of shaft 58. The screw 59 at the lower end of the shaft engages the worm-wheel 53. This shaft 58 and the gears 57 and 59 carried thereby prevent the arm L being turned independently of the worm-wheel 53, except as the said shaft is rotated. As the arbor D, disk E, and tablet F are rotated, the screw 56 turns the shaft 58, and consequently—the worm-wheel 53 being held stationary by the clamp M—the arm L is swung gradually to one side, so that the recorder engraves a spiral line on the wax face of the tablet. When the record has been cut, it is only necessary, in order to restore the tablet to the starting-point for reproducing, to draw back the recorder and to loosen clamp M, when arm L can be moved at once to the proper position.

A recorder constructed and mounted precisely as in Figs. 1, 2, 3, and 4 could be used in this machine; but, as shown, the recording-instrument H' is modified to some extent. The cutting-style 11 (which is the same as that of Figs. 4 to 6) is set into a block, 60, carried by a metal strip, 61. This is fastened to a block, 62, at the lower end of a back piece, 63, which is attached to the upper end of the tube 64, which forms the hollow standard for the recorder, and which is mounted on the bracket 65, so as to be capable of being turned to put the record into or out of action. The sound-conveying tube 66 corresponding to tube 21 of Figs. 1 and 2 communicates through the hinge with the interior of the tube 64. In front of the opening at the upper end of tube 64 is stretched a diaphragm, 67, of thin sheet metal, or it may be of other membrane or material, its edges being clamped between the ring 68 and back piece, 63, soft-rubber rings 69 and 70 being interposed one on each side of the diaphragm. On the opposite side of the diaphragm 67 from the tube 64 a light plate, 71, of metal cupped in the center, is held against the diaphragm by the pressure of the strip 61, a projection on the back of said strip bearing against the said plate 71.

In this machine the reproducer K, instead of being mounted on the same bracket as the recorder when the latter has been removed, is carried by a separate bracket, 72, the tube 73 being hinged thereto, so that the recorder and reproducer remain, or may remain, always attached to the machine, it only being necessary to turn one or the other into position, as may be required.

Referring to Figs. 18 to 20, A is the base or bed, B an upright frame, 7 the driving-shaft, 8 the fly-wheel, 9 the operating-crank handle, and G the friction-pinion, as in Figs. 1 and 2. The arbor P is supported in an upright position in bearings of the frame A B, and is revolved by the friction-pinion G engaging the friction-disk Q. The record is made on a wax-coated strip, R, of paper, which is passed around the periphery of the disk S in the groove formed thereon. As the strip passes in front of the recorder or reproducer, it is wound off one reel—say the reel T—and upon the other reel, U. The strip can be wound back upon the reel T when desired. Each reel rests by its own weight upon a platform or flange, 75, at the upper end of a hollow shaft, 76, which turns upon a stud, 77, fastened at the base to the bed B. A pin, 78, passes through the center of the reel, and forms a journal for it to turn upon. A nut, 79, holds the reel on, and may be used to bind it with more or less tension. On each shaft 76 is a belt-pulley, 80 and 81, respectively, driven by a crossed belt, 82 or 83, from a pulley, 84 and 85, on the arbor P. These pulleys 84 and 85 are loose upon the arbor, but are provided each with a clutch, 86 and 87, so placed (see Fig. 18) that when the arbor is turned to the left the clutch 87 engages the hub 89 on the arbor, and the pulley 85 is turned therewith, while when turned to the right the clutch 86 engages the hub 88. Each shaft 76 has a stop-clutch, 90 and 91, respectively, which holds it stationary when the strip is being wound on the other reel. Thus, when the arbor P is turned to the left the reel U is revolved in the direction indicated by the arrow, and the sleeve-supporting reel T is held stationary. The strip is thus stretched at all times, the degree of tension depending upon the friction between the reels and their supporting-flanges 75. The recorder H" is carried by a cross-piece, 92, supported by posts 93. The style 11 is carried by a cross-piece, 94, to which it is attached by means of the cup 95, of hard rubber, which forms a nut on the screw-threaded shank of the style, and said cup rests against a mica diaphragm, 96, whose edges are clamped between the screw-ring 97 and the back plate, 98. The tube 18, screwed into the back plate, is fastened by soldering or otherwise to the cross-piece 92. The tube 23 of the mouth-piece I fits into said tube 18. The ends of the cross-piece 92 are slotted to fit around the screws at the top of posts 93 and rest upon nuts 99, and are clamped by nuts 100. By means of these nuts the vertical position of the recorder can be adjusted. After one line has been engraved on the strip, the recorder can be adjusted to engrave as many additional lines parallel thereto as the strip will receive. The slots in the cross-piece 92 allow the recorder to be moved toward and away from the strip, so as to regulate the depth of the engraved line. To insure a greater nicety of adjustment, screws 101 are

tapped through the metal at the closed end of the slots, and bear at the point against the supporting-screws.

The reproducer K', Fig. 20, is similar to that shown in Figs. 9 and 10, except that the style 26 is so placed that the point is at the center instead of projecting beyond the edge of the instrument. Its position on the record is therefore not so readily seen; but with the form of machine shown in these figures this is less important. The same may be said of the loose mounting of the reproducer, although in point of fact the thin rubber diaphragm 38 gives a certain lateral play to the style. The tube 31 is rigidly fastened to a cross-piece, 102, identical with the cross-piece 92, and with said tube 31 the bearing-tube 30 and ear-piece 35 are connected.

The paper strip can be easily coated with the beeswax and paraffine compound by running the same through a body of melted composition and scraping one side, leaving what adheres to the other to harden thereon.

In Fig. 21 an arrangement for operating the recorder by electro-magnetism is shown. The magnet 107 is mounted on a bar, 108, journaled in bearings in standards 109. It is provided with a bobbin, 106, of wire, surrounding the pole piece, which bobbin is included in a circuit over which electrical undulations are caused to pass by any suitable transmitting-instrument—for example, such as commonly employed on telephone-lines. In front of the pole-piece or core of the bobbin is a diaphragm, 105, of magnetic material, whose edges are clamped between the ring 16 and back plate, 17. The cup 13 should always be in contact with diaphragm 105, and is pressed against it by the spring of piece 14. This cup, as well as the style 11, block 12, nut 15, and cross-piece 14, is the same as in the recorder H of Figs. 1 and 4.

It is evident that various modifications other than those indicated can be made and the invention still be employed in whole or in part, and also that parts of the invention may be used separately.

In the foregoing description details have been given with some minuteness. This has been done to furnish the best information in our power for enabling those skilled in the art to make and use the invention, and not with the intention of limiting the invention to the precise dimensions, proportions, shapes, and materials stated.

A means has been shown for impressing vibrations upon the recording-style by an electrical current through the intermediary of an electro-magnet, in a manner similar to that in which the diaphragm of an ordinary receiving-telephone has been vibrated.

It is evident that other means heretofore used for vibrating a diaphragm could be used in place of the magnet; also, it is evident that the vibrations of the reproducing-style could be taken up and transmitted by the means heretofore used for taking up and transmitting vibrations, (those of a telephone-diaphragm, for example.)

The term "cutting" is herein employed to indicate an action in which the material is removed in chips, shavings, or other small pieces—as in engraving, turning, and the like—and not simply displaced.

The displacement of the material is not only a different operation from the cutting contemplated by this invention, but is not calculated to accomplish the objects for which cutting or graving is employed.

Having now fully described our said invention and the manner in which the same is or may be carried into effect, what we claim is—

1. The method of forming a record of sounds by impressing sonorous vibrations upon a style, and thereby cutting in a solid body the record corresponding in form to the sound-waves, in contradistinction to the formation of sound-records by indenting a foil with a vibratory style, or cutting a strip by vibrating it against a revolving disk-cutter, substantially as described.

2. The method of forming a sound-record by impressing the sonorous vibrations upon a style in a direction at right angles to the recording-surface, and thereby cutting in a solid body a series of elevations and depressions of varying depth, corresponding in form to the sound-waves, substantially as described.

3. The vibratory cutting-style of a sound-recorder, substantially as described.

4. The cutting-style, in combination with a support permitting the same to be vibrated, and means for impressing sonorous vibrations thereon, substantially as described.

5. A vibratory cutting style, in combination with a sound-conveying tube for concentrating the sound-waves upon the style, substantially as described.

6. A vibratory cutting style, in combination with a tablet or other solid body in which the record is to be cut, and mechanism for supporting the same and moving it with reference to the said style, substantially as described.

7. A sound-record consisting of a tablet or other solid body having its surface cut or engraved with narrow lines of irregular or varied form corresponding to sound waves, substantially as described.

8. A sound-record consisting of a tablet or solid body having its surface cut or engraved with a number of lines of variable cross-section, the irregularities or variations corresponding in form to sound-waves, substantially as described.

9. The method of forming a sound or speech record which consists in engraving or cutting the same in wax or a wax-like composition, substantially as described.

10. The sound or speech record cut or engraved in wax or a wax-like composition, substantially as described.

11. The recording-tablet of a phonograph or sound-recording machine, having as the material for recording sounds or sonorous vibra-

tions the composition of beeswax and paraffine, substantially as described.

12. The sound or speech record cut or engraved in a wax like composition, such as the compound of beeswax and paraffine, substantially as described.

13. A tablet or body for recording sound-vibrations, consisting of a paper or pasteboard foundation and a surface coating of beeswax and paraffine compound, substantially as described.

14. The sound or speech record cut or engraved in a wax-like composition, such as the described compound of beeswax and paraffine, constituting a surface-coating to a paper or pasteboard foundation, substantially as described.

15. The method of making a sound or speech record which consists in engraving or cutting in the recording material an irregular groove with sloping walls, the shape of the groove representing the sound-vibrations, substantially as described.

16. The method of making a sound or speech record which consists in cutting in the recording material a groove with sloping walls and of variable cross-section, the variations corresponding in form to sound-waves, substantially as described.

17. The sound-record in the form of an irregular groove with sloping walls cut in solid material, substantially as described.

18. The sound-record cut in wax or wax-like composition in the form of an irregular groove with sloping walls, substantially as described.

19. The combination, with a reproducing-style, of a mounting therefor, which leaves said style-face to move laterally, and thereby adjust itself automatically to a sound-record, substantially as described.

20. The reproducer loosely mounted on a suitable support, so that the reproducing-style is capable of a lateral movement, and may in consequence thereof adjust itself automatically on the record, substantially as described.

21. The reproducer mounted on a universal joint and held against the record by yielding pressure, substantially as described.

22. The combination, with a grooved tablet or other body having a sound-record formed therein, of a reproducer having a rubbing-style loosely mounted, so that it is free to move laterally, and thus adjust itself to the groove, substantially as described.

23. The combination, with the tablet or other body having the sound record formed therein as an irregular groove with sloping walls, of a reproducer having a style for rubbing over said record and mounted on a universal joint, substantially as described.

24. The combination, with a sound-record formed in wax or a wax-like material, of a reproducer having a rubbing style for receiving sonorous vibrations from said record, substantially as described.

25. A reproducer having a style projecting beyond the edge or end of the instrument, so that the position of the point of the style on the record may readily be seen, substantially as described.

26. In a reproducer, the combination, with a vibratory plate or diaphragm, of a reproducing-style fastened flatwise on said plate or diaphragm and bent at the end, substantially as described.

27. The method of recording and reproducing sounds by cutting the record in a wax or wax-like material, and then rubbing over the record the style of a suitable reproducing instrument, so as to impress sonorous vibrations on said style, substantially as described.

28. The method of improving a sound-record which consists in producing an incipient fusion of the surface, substantially as described.

29. The improvement in preparing a sound-record, consisting in cutting the record in a fusible material, and then producing an incipient fusion of the surface, substantially as described.

30. The sound-recorder having a vibratory cutting-style held against the recording material by yielding pressure, substantially as described.

31. The recording-instrument having a vibratory cutting-style and mounted on a hinged arm, substantially as described.

32. The combination, with the tablet or body in which the sound-record is to be made, of the recording-instrument mounted on a hinged arm and resting by gravity against the tablet, substantially as described.

33. The recorder mounted on a hollow arm or standard, which constitutes also a sound-conveyer, substantially as described.

34. The recorder mounted upon an arm or standard hinged to its bracket or base, and provided with a sound-conveyer extending lengthwise of said arm, substantially as described.

35. The recorder mounted upon a hinged arm, and combined with a sound-conveyer which extends lengthwise of the arm, and is connected at the hinge with an exterior sound-conveyer, substantially as described.

36. The reproducer mounted upon a hollow standard which forms a sound-conveyer, substantially as described.

37. The reproducer mounted on a hinged arm, and provided with a sound-conveyer extending lengthwise of said arm, substantially as described.

38. The reproducer mounted on a hinged arm, and provided with a sound-conveyer extending lengthwise of said arm, and connected at the hinge with an exterior sound-conveyer, substantially as described.

39. The combination, with a sound-recorder, of a mouth-piece shaped to surround the mouth and nose of the user, and to concentrate the sound upon the recording devices, substantially as described.

40. The combination, with the tablet, in the form of a disk, and a recorder or reproducer,

of mechanism for causing a spiral line to be traced on the disk by the recorder or reproducer at a uniform surface-speed, substantially as described.

41. The combination, with the tablet, in the form of a disk, the arbor, and the metal disk operating as a friction-wheel, of the slide, or its equivalent, such as herein shown, in which said arbor is journaled, and the friction-pinion for revolving said disk, substantially as described.

42. The combination, with the recorder or the reproducer, the disk, the arbor, and the laterally-movable support to the arbor, of the friction-pinion placed behind and bearing against the disk at a point opposite the recorder or reproducer, substantially as described.

43. The combination, with a recording-style and the support therefor, of a cap on the back of said support, and the sound-conveying tube terminating just behind the cap, substantially as described.

44. In combination with the style of a sound-reproducer, a vibratory body or plate of hard rubber, upon which vibrations are impressed by said style, and through which they are transmitted, substantially as described.

45. A tablet provided with a wax or wax-like coating, and having engraved in said coating a spiral line with inequalities or irregularities corresponding in form to sound-waves, substantially as described.

46. A tablet provided with a coating of wax or wax-like composition, and having a sound-record engraved in said coating, said engraved coating having the glazed surface which results from an incipient fusion of the wax after cutting or engraving the record, substantially as described.

47. In combination with a sound-recorder, a flaring mouth-piece shaped to fit over the face of the user and to include his nose, and communicating through a tube or contracted opening with the space behind the diaphragm of said recorder, substantially as described.

In testimony whereof we have signed this specification in presence of two subscribing witnesses.

CHICHESTER A. BELL.
SUMNER TAINTER.

Witnesses:
PHILIP MAURO,
C. J. HEDRICK.

399
(No Model.)

5 Sheets—Sheet 1.

S. TAINTER.

APPARATUS FOR RECORDING AND REPRODUCING SOUNDS.

No. 341,288. Patented May 4, 1886.

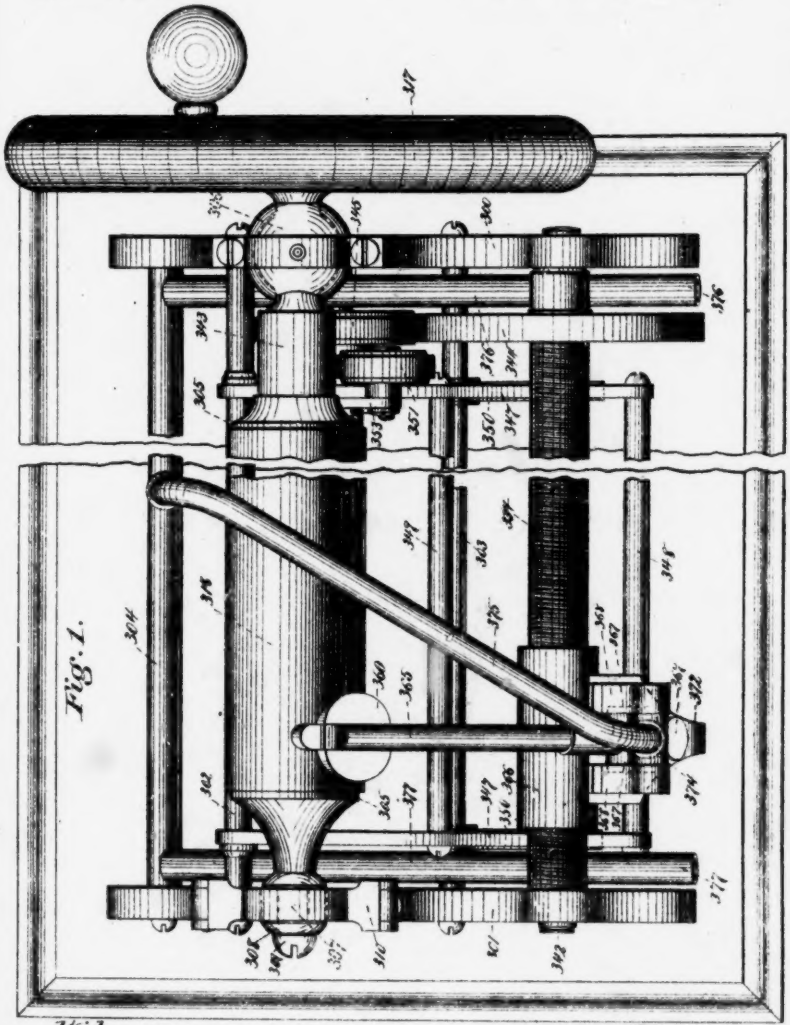

Fig. 1.

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5 Sheets—Sheet 2.

S. TAINTER.

APPARATUS FOR RECORDING AND REPRODUCING SOUNDS.

No. 341,288. Patented May 4, 1886.

Fig. 17.

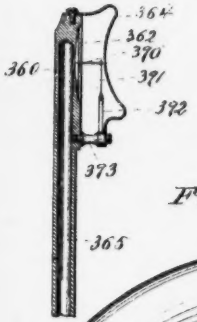


Fig. 8.

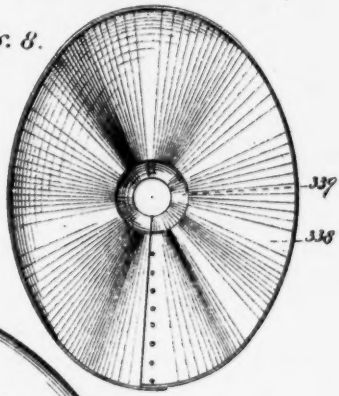
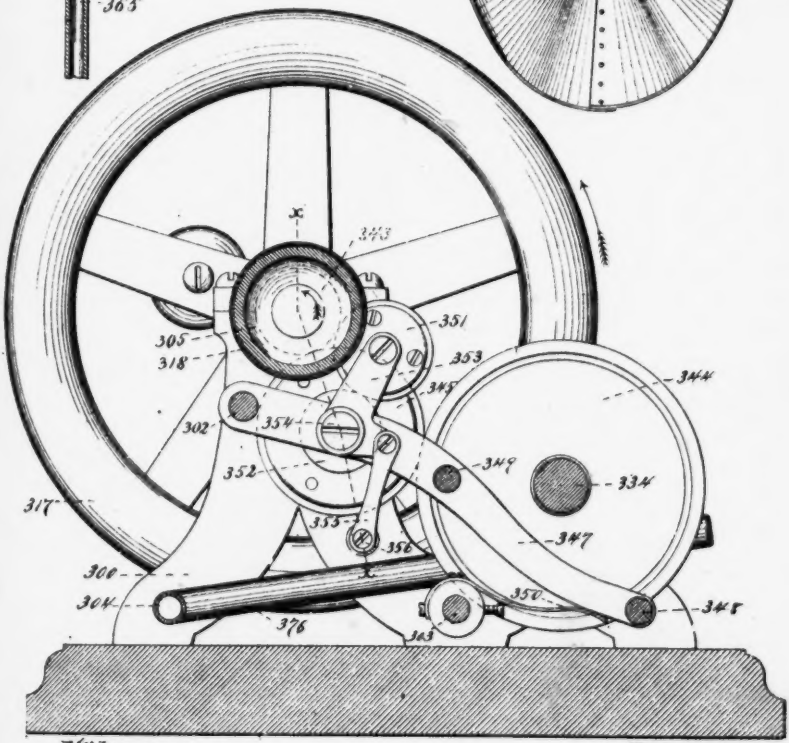


Fig. 2.



Witnesses
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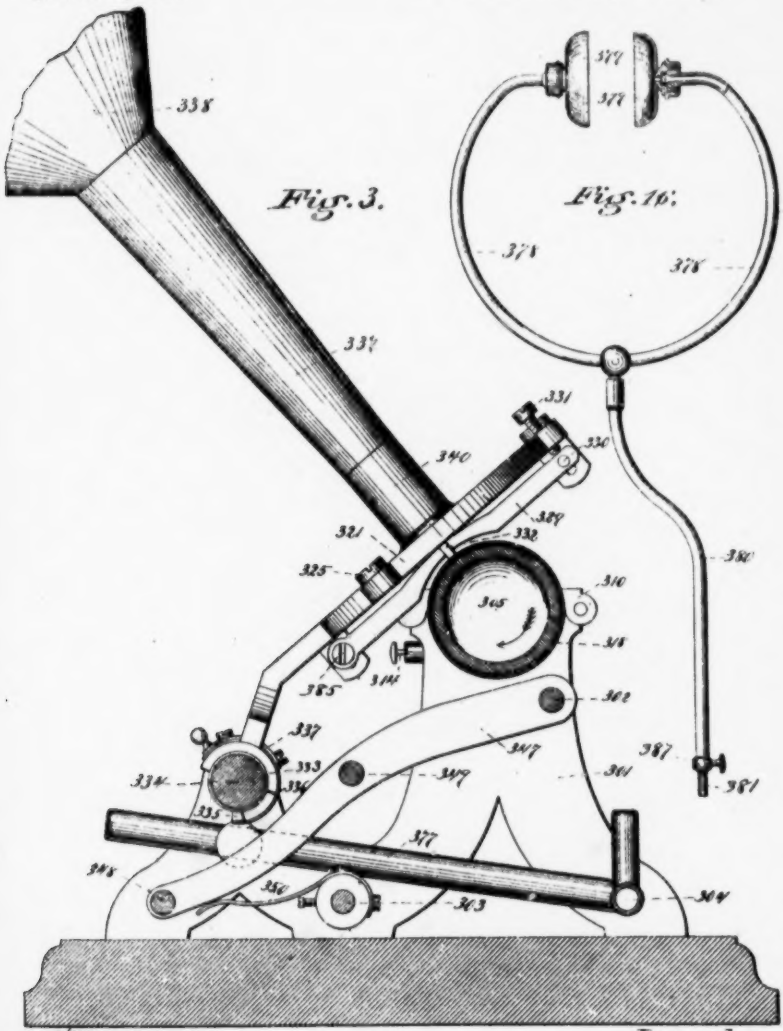
(No Model.)

5 Sheets--Sheet 3.

S. TAINTER.

APPARATUS FOR RECORDING AND REPRODUCING SOUNDS.

No. 341,288. Patented May 4, 1886.



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S. TAINTER.

APPARATUS FOR RECORDING AND REPRODUCING SOUNDS.

No. 341,288. Patented May 4, 1886.

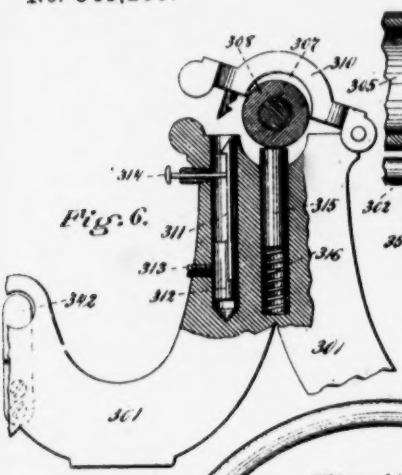


Fig. 6.

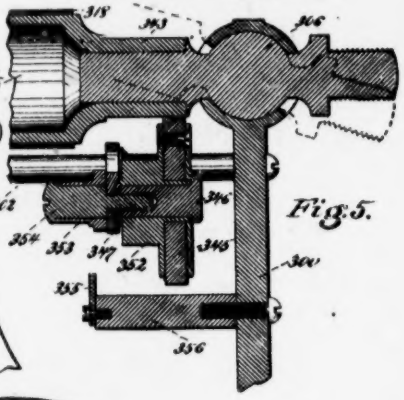
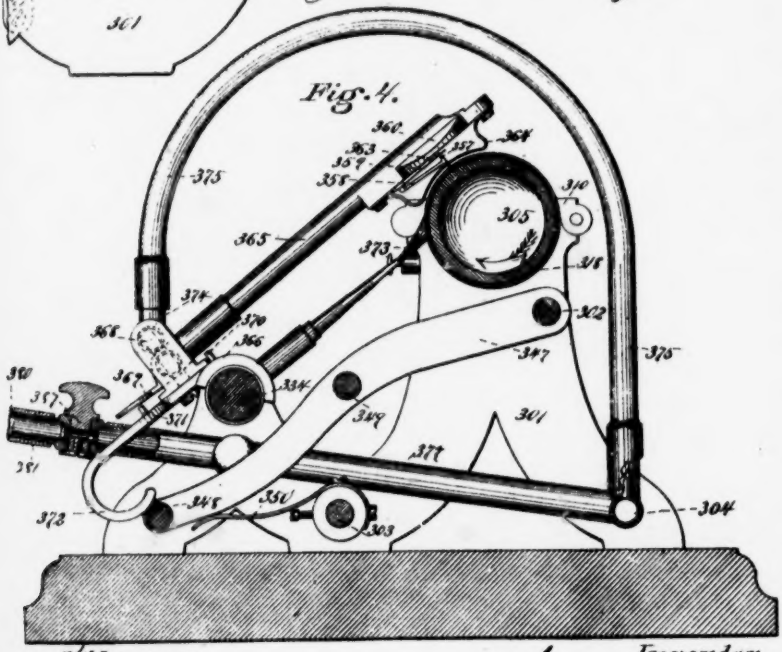


Fig. 5.

Fig. 4.



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(No Model.)

5 Sheets—Sheet 5.

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APPARATUS FOR RECORDING AND REPRODUCING SOUNDS.

No. 341,288. Patented May 4, 1886.

Fig. 7.

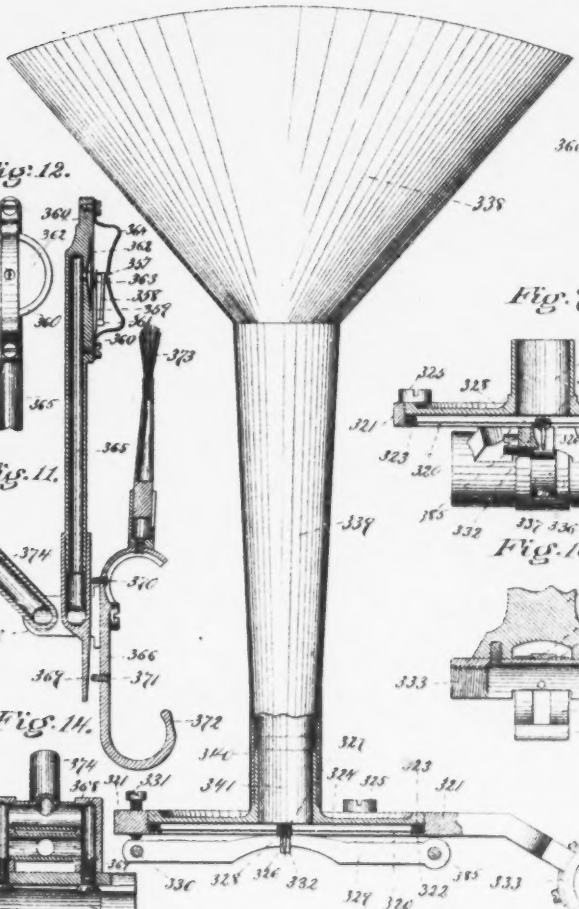


Fig. 15.

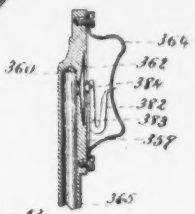


Fig. 12.

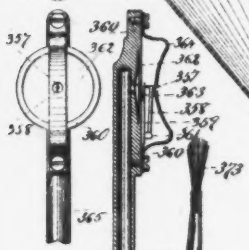


Fig. 11.

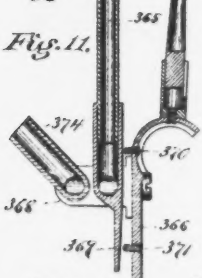


Fig. 14.

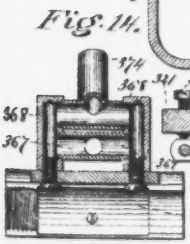


Fig. 9.

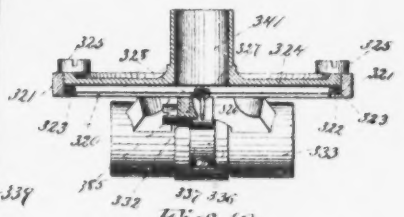
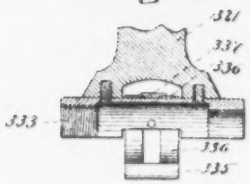


Fig. 10.



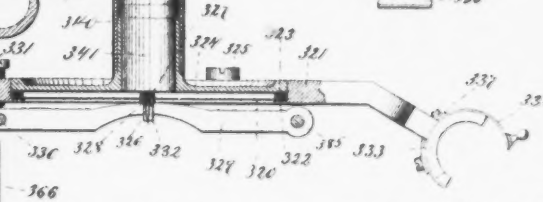
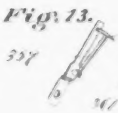


Fig. 13.



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UNITED STATES PATENT OFFICE.

SUMNER TAINTER, OF WASHINGTON DISTRICT OF COLUMBIA.

APPARATUS FOR RECORDING AND REPRODUCING SOUNDS.

SPECIFICATION forming part of Letters Patent No. 341,936, dated May 4, 1886.

Application filed December 4, 1885. Serial No. 184,855. (No model.)

To all whom it may concern:

Be it known that I, SUMNER TAINTER, a resident of Washington, in the District of Columbia, have invented a new and useful Improvement in Apparatus for Recording and Reproducing Sounds or Sonorous Vibrations, which improvement is fully set forth in the following specification.

This invention has for its object to increase the general efficiency of apparatus for recording and reproducing speech and other sounds, commonly known as "phonographs;" and it consists, principally, in the following improvements:

First. A new recording-tablet is employed. It consists of a hollow cylinder or tube of paper, or other suitable material, coated with wax or wax-like composition, preferably a compound or mixture of beeswax and paraffine. The record is cut in the coating. The advantages of this form of tablet are that it may be very light while having sufficient stiffness to retain its form and avoid the danger of cracking the coating, that it is compact and adapted for transmission through the mails or otherwise, that the recording-surface is continuous, and that it can very readily be placed on and removed from the holder by which it is supported and rotated in recording and reproducing.

Second. The tablet-holder is made in the form of a cylinder, over which the tubular tablet can be forced or slipped and from which it can be removed as desired. This cylinder may be solid; but for lightness it is preferably made hollow. It is of metal, or may be of other solid material. It is journaled in bearings, and is provided with a crank or other means for rotating the same.

Third. In order to support the tablet-holder in the most solid manner, it is provided with a journal at each end, and the journals and bearings are constructed to prevent end motion. It is made detachable from its support at one or both ends, in order to permit the placing and removal of the tablet. It will be understood that any ordinary or suitable means may be used for this purpose; but it is preferred to use the means next to be described.

Fourth. To facilitate the placing of the tablet on the holder and its removal therefrom, and to avoid the removal of the tablet-holder from the machine-frame when this operation is performed, a ball-journal fitting in a cup or socket bearing is employed at one end, (the other end being made detachable from the machine-frame,) so that the holder can readily be tipped up and held in that position while placing or removing the tablet. The ball-journal and socket-bearing prevent end motion of the tablet-holder.

Fifth. With the object of further facilitating the placing and removal of the tablet, the detachable end of the tablet-holder is held down by means of a catch or other device which can readily be released, and a spring is combined with the holder in such a way as to raise the detachable end thereof when the catch is released.

Sixth. The journal at the detachable end of the tablet-holder, instead of resting directly upon the machine-frame, or a bearing attached thereto, is provided with a box or sleeve which fits over the journal and forms the bearing therefor. This box or sleeve remains on the journal when it is detached, and protects it from dirt, as well as prevents the lubricant on the journal from soiling the hands of the person using the machine. The spring for raising the holder acts upon this box, (a rod being interposed,) and the journal is relieved of its pressure. Another advantage which the use of this box or sleeve gives is that if the two bearings in the machine-frame are not precisely in line the box or sleeve may adjust itself properly without jamming the journal. The very slight space which always intervenes when two separate pieces rest in contact will suffice to compensate for the very slight irregularity in alignment which a careful workman would leave.

Seventh. For recording the sonorous vibrations in or on the tablet, and for producing the sounds from the record, the recording or the reproducing instrument (called hereinafter "recorder" and "reproducer," respectively,) is moved lengthwise of the tablet by a screw, which is revolved at a less speed than the tablet. Thus with a comparatively coarse-threaded screw the lines may be traced on the tablet very close together. Heretofore the lines were the same distance apart as the threads of the screw.

Eighth. To enable the recorder and reproducer readily to be applied to and removed from the screw, so that one screw can be used for both instruments, they are each provided with a divided or partial nut, which engages the screw. To prevent the instrument from being disengaged accidentally, a guard is or may be provided which can be slipped under the screw when the instrument is in place, or be withdrawn when it is desired to remove it. Both the reproducer and the recorder may have such a guard; but practically it is more important for the recorder.

Ninth. Instead of having the recorder and reproducer mounted upon a slide moving in ways or guides, and connected with a screw for moving the same, they are mounted on a carrier, which is not only engaged by said screw, but supported by the same, so as to be movable lengthwise of the screw, and capable also of turning on it as on a journal. Thus devices heretofore considered necessary are dispensed with and a movement of the recorder or reproducer toward and away from the tablet is provided for.

Tenth. It is often desirable, especially in reproducing, to stop the operation of the machine temporarily. To enable this to be effected instantly without stopping the main shaft of the machine, mechanism is provided for putting the feed-screw out of action, and at the same time automatically lifting the instrument clear of the record. Heretofore it has been necessary to stop the machine entirely. This is not desirable, because in stopping and restarting the machine a difference in speed, which appears on the record or in the sounds reproduced, is almost certainly made, particularly where a fly-wheel is used to give steadiness of motion.

Eleventh. It is also desirable in reproducing to be able to repeat a word, a sentence, or paragraph. To effect this a reversing as well as a stop mechanism is employed, so that by bringing said mechanism into action the motion of the reproducer is reversed and the instrument is brought back to the beginning of the part to be repeated, being meanwhile lifted clear of the record, which continues or may continue to revolve in the same direction at a uniform speed

Twelfth. In order that the depth of the record may be unaffected by the slight distortions of the recording-surface, (which it is very difficult to avoid, whether this surface be plane, as in the disk-tablet, or cylindrical, as in the improved form of tablet before indicated,) the recorder is pressed toward the recording-tablet by yielding pressure, (such as that of gravity or a spring,) and is provided with a rest, which bears upon the tablet. The recording-style projects beyond this rest and is connected with a diaphragm or other known or suitable means for impressing sonorous vibrations upon it independently of the rest. By having the recorder maintained always at a given distance from the recording-surface independently of the recording-style, it is possible to cut effectively a shallower record than can be done otherwise, because if the recorder is held stationary the depth of the record must always be greater than the variations in the distance of the recording-surface due to the distortions thereof, and, on the other hand, if the yielding pressure of the recorder is borne by the style it will, if heavy enough for other purposes, press the style to a greater depth than is otherwise necessary. The use of the rest thus relieves the recording-style of pressure, and enables it to be mounted more sensitively and to be made lighter, while at the same time and for a like reason its amplitude of vibration under a given impulse and consequently the strength of the record are increased. The rest could course, be used with any ordinary or suitable mode of mounting the style.

Thirteenth. To regulate the depth of the record the rest is made adjustable lengthwise of the recording-style.

Fourteenth. In order to secure the most sensitive mounting for the recording-style, the latter is made from a short piece of wire and is attached directly to a diaphragm, so as to be carried thereby, the means preferably employed being a screw-thread on the style, a nut of hard rubber engaging the same, and a disk or washer of hard rubber, between which and the nut the diaphragm is clamped.

Fifteenth. A sound conveyor or concentrator is used for the recorder, which concentrator comprises a flaring mouth-piece of elliptical or oval section and a tapering tube forming a continuation thereof. It is found that a mouth-piece which concentrates the sound is desirable to increase the strength of the record, that a mouth-piece which covers the nose is desirable to convey the nasal as well as other vibrations, and that a tapering tube is desirable to amplify and re-enforce the sound-waves. It is found that the longer this tube is, within certain limits, the greater its re-enforcement of the sound; but that a too great length gives a hollow effect, as when words are spoken into an empty barrel. For the sake of lightness it is preferred to make the mouth-piece and tube of thin sheets of hard rubber, or of paper, or the like material. Metal mouth-pieces and tubes have also been used with good effect.

Sixteenth. Where the record is cut in wax the little shavings or chips are apt to cling to the record and have to be brushed off before reproducing. This can be done by hand; but it is not desirable to rely wholly upon hand-brushing, as too much care would have to be exercised to insure that no particles adhere. The record is also liable to collect dust. To avoid difficulty on these accounts without care on the part of the user, the reproducer is provided with a small brush, which bears upon the tablet and sweeps the record in advance of the reproducing-style.

Seventeenth. The record is not always per-

fectly true or straight—that is to say, the recording-style not only moves lengthwise or at right angles to the recording-surface, but has or is liable to have a side vibration, which of course is recorded in the tablet. These side vibrations produce errors in reproducing unless means are provided for enabling the reproducing-style to move sidewise also. The mounting of the reproducer on a universal joint obviates the difficulty to a certain extent, but not altogether satisfactorily, since the inertia due to the large mass of the reproducer is too great for it to respond as quickly as required. The difficulty is in the present invention overcome much more thoroughly by supporting the reproducing-style so that it, or at least the end in contact with the record, can move sidewise independently of the diaphragm or other device upon which it impresses the vibrations. This freedom to move sidewise can be secured by allowing the style to rock upon the end in contact with the diaphragm or other device behind, or by making the style in whole or in part of flexible material, or by mounting it on a flexible support, the flexibility of course being in the required direction.

Eighteenth. In order to allow the reproducing-style the greatest freedom of side movement, while insuring its return to a central position, and without impairing to a serious extent its rigidity in other directions, a comparatively broad and thin strip of spring metal, placed on edge is connected with or forms part of the reproducing-style. Such a strip is very flexible to side pressures, but comparatively rigid to other pressures. The strip is fastened to the diaphragm, or to the device upon which it is desired to impress the vibrations, or it is otherwise hinged so that it can impress vibrations on said device; or said strip may be rigidly connected with the frame of the reproducer and the style be flexibly connected with the outer end of the strip. Preferably the reproducing-style is fastened to the end of a thin metal strip parallel with the width thereof, so as to form a hammer-like arrangement, the style being the hammer-head. It is a pin or wire several times as thick as the metal strip. The vibrations are transmitted through the hammer-head, the metal strip being attached to a spring, or it may be otherwise hinged to the frame of the reproducer.

Nineteenth. In transmitting the vibrations to the diaphragm it is found that with a rigid connection between the record and the diaphragm pronounced foreign vibrations are impressed upon the diaphragm or its substitute, producing scratching noises. These foreign noises can be lessened without diminishing the reproduced speech to the same extent by the interposition of a flat metal spring in such a way that while serving as the means of communicating vibrations to the diaphragm it can be bent independently. It is probable that this spring absorbs the vibrations which produce the scratching noises to the greatest extent, because they are more minute and rapid than speech-vibrations. Heretofore a section of rubber tubing has been interposed between the style and diaphragm; but it cannot be made as delicate as a metal spring, and for other reasons, also, is not so advantageous. For example, it is believed that it does not transmit the true vibrations of the record with as much clearness, the rubber loses its elasticity after a short time, and the tubular form of spring is less compact and less easily secured in place.

Twentieth. Another difficulty in reproducing is the passage of the style from one elevation of the record to the next without descending to the bottom of the space between. This causes a rattling sound, and sometimes makes the reproduction unintelligible. It is overcome to a useful extent, if not entirely, by combining with the style a quick-returning spring, by which the style will be pressed to the bottom of the record in the short space between two elevations. This spring should be of quicker return than the diaphragm. It is evident that the same spring may perform this function and also that of absorbing the foreign vibrations.

Twenty-first. The diaphragm is pressed against a concave seat whose walls converge like the walls of a cone, or of a section of a sphere, ellipsoid, paraboloid, or the like toward an opening through which the sound can escape. Thus a space of the general shape of a plano-convex lens, or, taking into consideration the slight convexity of the inner side of the diaphragm of a concavo-convex lens, is formed behind the diaphragm. This form of space is found to convey the sounds better than the flat space, such as customary in speaking-telephone receivers as well as in the ordinary phonograph. This concave seat for the diaphragm is also advantageous, as it makes the latter self-centering. A spring bearing upon the diaphragm holds it in place and also strains it. This spring may or may not be employed for absorbing the foreign vibrations, or for giving a quick return to the style, or for both. The arrangement preferably employed is to have a light flat spring project above the diaphragm, a block (say of cork) being interposed between the spring and the diaphragm and the style pressing against the end of the spring a short distance beyond the block. The block may be secured in the most effective position or it may be left unfastened, so that it can be adjusted lengthwise of the spring to increase or diminish the part projecting beyond the block or to bring it directly under the style. In this last position the loudest reproduction is obtained, but the scratching and rattling noises are also the most pronounced.

Twenty-second. The diaphragm is preferably made of hard rubber, this material having been found to give out pure sounds, the minute foreign vibrations being absorbed to a

greater extent than with mica or metal, either of which and other materials also can be used with intelligible results.

Twenty-third. To protect the style from accidental injury, it is protected by a guard, beyond which only the rubbing end or point of the style projects. As a further protection, the guard is curved outward on either side of the style, forming horns, which, if the reproducer be placed face down on a table, sustain the weight instead of allowing it to come on the style. The particular form of guard is of course only suitable for use with a cylindrical record, which can enter between the horns to make contact with the style.

Twenty-fourth. The sounds from the reproducer can be conveyed to the ear in various ways; but preferably the space behind the diaphragm or other vibratory body is connected by a sound-conveying tube with a double ear-piece somewhat similar to a stethoscope. It consist of two elastic and flexible hollow branches provided each with a cup fastened to the branch by a ball-and-socket joint. The cups fit over the ears and are held against the head by the elasticity of the branches, the universal joint allowing each cup to adjust itself to the head of the user.

Twenty-fifth. It is found desirable in reproducing to modify the loudness of the reproduced sounds according to the sensitiveness of the ear of the listener. This effect can be produced by the adjustment of the block between the spring and the diaphragm mentioned above under the twenty-first head; but it is not always convenient or advantageous to produce it in that way—as, for example, if two persons are listening to the instrument at the same time. To accomplish the desired object, a stop-cock is placed in the sound-conveying tube between the reproducer-diaphragm and the ear, so that by partially closing the same more or less of the sounds can be cut off, as desired. Where more than one person is listening, each of the sound-conveyers may have its own stop-cock.

Twenty-sixth. When a device such as just described is used, or when any device is used which is to be held by the user, or to be placed close to his ear, there is always a liability of the user pulling upon or jarring the reproducer, and if this is not firmly secured of pulling it from the machine. To overcome this difficulty without interfering with the traverse of the reproducer in front of the record, a flexible connection adapted to convey sound, and at the same time not restrict the traverse of the reproducer, is provided between the reproducer and a tube or tubular coupling attached to the machine-frame. The ear-tube or other device is connected with this tube or coupling, so that any pull or thrust comes upon the solid machine-frame, and will or may detach the ear-tube rather than damage the machine.

Twenty-seventh. In placing the reproducer on the screw it is desirable to hold the style away from the record until the reproducer is in place on the screw, and in removing it to lift the style from the record before attempting to remove the reproducer. The object is to prevent injury to the record. To effect the desired result the standard of the reproducer is hinged to its base or carrier, and is provided with a tail or thumb piece, or some equivalent device, so that in grasping the base or carrier the thumb or other part of the hand pressing upon said tail will hold the reproducer away from the record. Upon release of the tail the reproducer rests by its weight (which is preferably made very small) upon the record.

The invention further comprises certain special constructions, combinations, and arrangements of parts, as hereinafter set forth, among which are included the combination, in one machine, of the several improvements already indicated, or of two or more of them.

Having explained the principle of the invention, a description will now be given of what is considered the best mode of applying the same, reference being had to the accompanying drawings, which form a part of this specification

Figure 1 is a plan view of a machine or phonograph constructed in accordance with the invention, the reproducer being shown in place and the recorder omitted; Fig. 2, a vertical cross-section in elevation, looking to the right in Fig. 1; Fig. 3, a section in the plane of Fig. 2, but in elevation, looking to the left, the recorder being shown in place and its mouth-piece being broken away; Fig. 4, a view similar to Fig. 3, but with the reproducer in place instead of the recorder; Fig. 5, a partial vertical longitudinal section on line x x of Fig. 2; Fig. 6, an elevation, partly in section, of a part of the left end of the machine. Fig. 7 is an elevation, partly in section, of the recorder, its carrier, and sound-concentrator; Fig. 8, a top view (on a reduced scale) of the sound-concentrator of the recorder; Fig. 9, a central section of the recorder in a plane at right angles to those of Figs. 3 and 7, showing the base or carrier in elevation, and Fig. 10 a section through the base or carrier of the reproducer. Fig. 11 is a central vertical section of the reproducer, its carrier, and certain accessory parts; Fig. 12, a face view of the reproducer; Fig. 13, a perspective detail view; Fig. 14, a section through the base or carrier of the instrument; Fig. 15, a section illustrating a modified form of style; Fig. 16, an elevation, partly in section, (on a reduced scale,) of a listening device with double ear-pieces; and Fig. 17 a section illustrating a third modification of the reproducer.

The frame of the machine, as shown, consists of two upright side pieces, 300 and 301, connected by tie-rods 302 and 303 and the tube 304, which serves as a tie-rod. The tablet-holder 305, in the form of an elongated metal cylinder, is journaled in bearings at the top of the side pieces. The right journal, 306, is ball-

shaped and rests in a socket, (see Fig. 5,) which permits the tablet-holder to be tilted up, as indicated in dotted lines, as well as to be revolved, while endwise motion is effectually prevented. The fly-wheel 317, provided with a crank-handle, is mounted on a prolongation of the journal and serves to revolve the tablet-holder. The left journal, 307, which is or may be cylindrical, fits and revolves within a box, 308, which is held in place on the journal by a screw, 309, in the end thereof. The box 308 is confined between a seat on the side piece, 301, and the hinged cap 310, which is held down by the spring-catch 311, (see Fig. 6,) fastened at the bottom in the plug 312, which is adjustably retained in position by the set-screw 313. The catch can be released at will by a push-pin, 314. Below the journal 307 is a follower, 315, fitting into and movable in a hole in side piece, 301, acted upon by the spiral compression-spring 316, placed below it in the hole. The box 308 rests upon the top of the follower and relieves the journal of all pressure from the spring 316 when the cap 310 is held down by the catch 311. This pressure prevents the box turning. On releasing the catch 311 the spring 316 expands and throws up the journal 307 and the cap 310, as shown in Fig. 6. The cap can then be turned back and the tablet-holder be tipped up and held in an inclined position by a hand on the fly-wheel 317. The tablet consists of an elongated hollow cylinder or tube, 318, of paper or pasteboard—say one-fortieth of an inch in thickness—coated with a layer about one-thirtieth ($\frac{1}{30}$) of an inch in thickness of a compound of one part, by weight, of white beeswax and two parts of paraffine. The beeswax and paraffine should be melted and stirred together, and then filtered, unless they are entirely free from sticks, dirt, and other foreign particles. The coating is or may be applied by stopping the ends of the cylinder, partly immersing it in a bath of the melted composition and turning it therein one or more times, removing it and allowing the material to harden, keeping it in motion meanwhile to prevent running, then immersing and rotating it again, and allowing the adherent layer to harden, and so continuing until a coating of rather more than the thickness above indicated is attained. The surface is then turned smooth in a lathe, being supported on a cylinder like the tablet-holder 305. The tablet is then ready for use by placing over the holder, or it may be kept until wanted. In keeping care should be taken to prevent access of dust. After the tablet has been placed on the holder the detachable end of the latter is pressed down into its bearing, and the cap 310 is engaged by the catch 311, which holds it down.

The record is made on or in the wax coating of the tablet by the instrument shown in Figs. 3 and 7 to 10. The diaphragm 320 (of mica, from six to twelve one-thousandths [illegible] to $\frac{1}{1000}$) of an inch in thickness) is held in a frame, 321, between the flange 322 and a ring, 323, of soft rubber tubing, which is held down by the back plate 324, and screws 325, tapped into the frame. The heads of these screws project over the edge of the back plate. The recording-style 326, formed of a steel wire (say, one-thirty-second of an inch in diameter) sharpened at the front or operating end, like an ordinary round-pointed turning tool and screw threaded at the other, is fastened to the center of the diaphragm by the nut 327 and washer 328, which are on opposite sides of the diaphragm, and clamp it between them. The cutting-edge of the style is preferably shaped to cut a groove of curved rather than of V-shaped cross-section. A bar, 329, is hinged at one end to the frame 321 by a pivot screw-pin, 385, and at the other adjustably but rigidly fastened thereto by a screw, 330. A second screw, 331, bearing at the point against the top of the bar 329, assists in securing an exact adjustment and in holding the bar rigid. At the middle of the bar is an enlargement, 332, which extends into close proximity to the recording-style (see Fig. 9) and whose bottom is polished or made smooth, so that it may bear upon the wax-coated tablet and move over it without injury to the wax surface. The frame 321 is provided with a base or carrier, 333, in the form of a half-nut. In use this nut is supported and engaged by the rotatory feed-screw 334, which is journaled in bearings in the side pieces, 300 and 301. The base or carrier is elongated to give a sufficient bearing on the screw to prevent the tipping of the recorder sidewise. To assist in preventing this, and also to prevent the carrier being lifted from the screw, a guard is provided, which consists of a block, 335, attached to the end of a curved slide, 336. This slide is guided by the piece 337, and can be turned from the position shown in Fig. 7 when the guard does not interfere with the placing of the carrier on the screw into the position shown in Figs. 3 and 10, when it prevents the removal. The carrier is, however, free to turn on the screw, as on an axle, so that the recorder, under the action of gravity, will press against the tablet, the bar 329 forming a rest to support it. The recording-style projects beyond the rest and enters the wax coating, penetrating it a distance which is regulated by the adjustment of said rest or bar 329. The sound-conveyer consists of an elliptical mouth-piece, 338, and a tapering tube, 339, both made, for lightness, of hard rubber, in thin sheets—say one-thirty-second ($\frac{1}{32}$) of an inch thick. A metal thimble, 340, is attached to the small end of the tapering tube, which fits over a tubular projection, 341, on the back plate. The rotation of the feed-screw 334 moves the recorder lengthwise of the recording-tablet, and this movement, in connection with the rotation of the tablet, causes the style to trace a spiral line in the wax, which line becomes a sound-record by talking into the mouth-piece 338, and thereby impressing sonorous vibra-

tions upon the diaphragm and style. The style then cuts a variable line, whose irregularities or inequalities correspond to the sound to be recorded. The spiral line can be omitted for a given distance, when desired, by simply lifting the recorder from the tablet. The feed-screw 334 should be so mounted as to prevent endwise movement, which would tend to make the traced line more or less zigzag. As shown, a spring, 342, (see Figs. 1 and 6,) presses constantly upon the left end of the screw to keep it against the bearing at the opposite end. The feed-screw is revolved by the friction-wheels. (Shown in Figs. 1, 2, and 5.) In recording, the friction-pinion 343 on the tablet-holder communicates motion to the large wheel 344, fast on the feed-screw, through the intermediate 345. Thus the feed-screw has a much slower rotation than the tablet-holder, and the convolutions of the line traced on the tablet are much closer together than the threads of the feed-screw. The intermediate 345 is mounted on the stud 346, (see Fig. 5,) which is carried by a hinged frame, so that the intermediate can be moved out of contact with the pinion whenever it is desired to stop the feed, without interrupting the rotation of the tablet-holder. The hinged frame consists of side bars, 347, which are hinged separably on the tie-rod 302; and are rigidly connected with each other by tie-bars 348 and 349. A spring, 350, under each side bar tends to lift the frame and press the intermediate 345 against the pinion 343. The feed-screw is therefore normally in engagement with the tablet-holder; but can be disengaged at will by pressing upon the tie-bar 348. The friction-wheels 351 and 352 are for reversing the revolution of the feed-screw. The wheel or pinion 352 is simply a hub on the side of the intermediate 345. The wheel 351 presses against the pinion 352, and is mounted on a stud at the end of bent lever 353, which turns upon the screw-stud 354 in line with the stud 346. (See Fig. 5.) The lever 353 thus turns about the axis of the wheel 352, and the wheel 351 may roll over the surface of the wheel 352, so as to be pressed against and thus engage the pinion 343 on the tablet-holder. The short arm of the bent lever is connected by a link, 355, with the stud 356, itself secured fast to the side piece, 300. When, therefore, the tie-bar 348 and side bars, 347, are depressed, the lever, as shown in Fig. 2, is turned to the left, and when it is sufficiently depressed the wheel 351 is held against and engaged by the pinion 343. Motion is now communicated through the wheels 343, 351, 352, 345, and 344, the rotation of the feed-screw is reversed, and a more rapid rotation is imparted to it. The carrier will therefore be moved backward (to the left in Fig. 1) more rapidly than it was advanced. There will ordinarily be not much occasion to use the stop and reversing mechanism in recording. It is for use in reproducing that it has been specially devised. The reproducer (see Figs. 1, 4, 11, 12, and 13) has a style, 357, welded or otherwise fastened to the end of a flexible strip, 358, of thin steel—say three one-thousandths ($\frac{1}{1000}$) of an inch in thickness—so as to project beyond both edges of the same like a hammer-head. The outer end of this style (which should be somewhat more tapering at the point than the recording-style) rubs over the record or tablet. The inner end presses upon a light flat spring, 359, fastened at the lower end to the frame 300 of the reproducer. The strip 358 is soldered into a slit of the ear 361, on the spring, which by bending between the ear 361, and where it is attached to the frame 300 allows the style and strip to be moved in or out, and thus serves to hinge the same to the said frame. The diaphragm 362, of hard rubber about seven one-thousandths ($\frac{7}{1000}$) of an inch in thickness, is pressed against a conical seat in the face of the frame 360 by means of the spring 359, between which and said diaphragm is a little block, 363, of cork. It serves the double function of pressing the diaphragm against its seat, and also of communicating vibrations to it. Cork is used because it is light and conveys vibrations well and has sufficient friction upon the diaphragm and spring to remain in the position in which it may be placed. By leaving it to be held by friction it can be adjusted by the user to give the best effects; but it can be secured by cement or otherwise in the position which the maker or adjuster of the instrument may determine. Preferably it occupies a position intermediate the style 357 and the edge of the diaphragm, as shown; but it can be set directly opposite the style. In the former position there is a certain length of the spring 359 beyond the cork, which length forms a tongue with a very high rate of normal vibration. It absorbs a considerable portion of the small vibrations which produce scratching noises, and it thus makes the articulation more distinct. It also reduces somewhat the loudness of the sounds reproduced, but the increased distinctness more than compensates for any loss in loudness.

Another effect which the tongue has is to return the style more perfectly when it has been pushed out by an elevation on the record. It does this because its normal vibration is quicker than that of the diaphragm or because its amplitude of vibration is larger, or for both reasons. It will be understood that this spring-tongue is compressed by the weight of the reproducer, which is sustained by the style. This weight is actually very small, the frame being made, for lightness, of hard rubber, but in comparison with the strength of the spring-tongue it is considerable. It will be observed that the diaphragm is strained by the spring in addition to the strain due to the weight of the reproducer. The inner end of the style 357 preferably rests in a hole or recess in the spring 359, so that it is prevented from side motion bodily, although capable of rocking on the inner end as a center. The bending of the strip 358 allows this side movement of the

front end of the style to take place with the greatest freedom. A bodily movement of the style sidewise could be permitted, if desired, but a stop should then be used to prevent it from being pushed off the spring 359.

To protect the style and other parts of the reproducer, a guard, 364, fastened to the front of frame 360, and is perforated at the center for the passage of the style. On either side of the center it is bent outward to form horns to support the instrument when placed face downward on a table or flat surface.

The reproducer, consisting of the parts just described, is mounted upon a hollow standard, 365, which is hinged at the bottom to the carrier 366 by means of hollow trunnions 367, fitting in hollow uprights 368 on said carrier. The reproducer-standard 365 is provided with a thumb-piece, 369, which can be pressed to hold up the reproducer in placing the carrier on and removing it from the feed-screw 334. There are front and back screw-stops, 370 and 371, which limit the movement of the reproducer independently of the carrier. This latter is provided with a half-nut to rest upon and engage the feed-screw, the same as the carrier of the recorder. It is not provided with a guard to retain it on the feed-screw because it is considered unnecessary, particularly when a flexible sound-conveyer is employed, as will presently be described. It is provided with a tail or prolongation, 372, which rests upon the tie-bar 348, (see Fig. 4,) so that when this is depressed to stop or to reverse the feed-screw the carrier will turn to the left (the center of gravity being on that side of the feed-screw) and automatically lift the reproducing-style 357 from contact with the tablet 318, in or on which the record is formed. When the tie-bar 348 is released, the springs 350 raise it and turn the reproducer and its carrier to the right, so that the style again makes contact with the record. It will be observed that the pressure of the springs 350 does not force the style against the record, because the reproducer is hinged to its carrier and only its very light weight comes upon the reproducing-style and the record. On the carrier is a brush, 373, which, when the producer is in action, bears upon the record and clears it of dust or shavings of wax or other lightly-adhering matter in advance of the reproducing-style.

The hollow standard 365 serves to convey sound from the lenticular chamber behind the diaphragm into the uprights 368, with the interior of which the coupling 374 communicates. To this coupling a flexible sound-conveyer, 375, is attached at one end, the other end being connected with an upright branch of the tube 304. Thus the sound is conveyed from the interior of the uprights 368 through the coupling 374 and sound-conveyer 375 and tube 304, the flexibility of said conveyer 375 permitting the traverse of the reproducer, as well as the turning of the carrier 366 on the feed-screw 334. The tube 304 communicates with tubes 376 and 377, one at each end of the machine. A hearing-tube is or may be attached to either or both tubes. Preferably the apparatus shown in Fig. 16 is employed It consists of two elastic and flexible hollow branches, 378, each provided at the outer end with a cup, 379, attached by a ball-and-socket joint, and a flexible sound-conveying tube, 380, for connecting both branches with the tube 376 or 377. As shown, there is a hollow metal coupling, 381, at the free end of the flexible tube 380, of such exterior diameter as to fit snugly in the tube which is to receive it. (See Fig. 4.) This coupling is provided with a stop-cock, 387, which can be turned to cut off more or less sound if the reproduction be too loud. This diminution in loudness makes the scratching noises less distracting to a person with a sensitive ear.

In use the cups 379 are placed one over each ear of the listener, the ball-and-socket joint permitting the cup to adjust itself to his head, and the elasticity of the branches 378 drawing them with sufficient pressure to support the apparatus.

The branches may be made of hard vulcanized rubber, in order to secure the requisite flexibility and elasticity; but it is evident that sound-conveying branches having these qualities could be constructed of various materials and in various ways

Instead of applying the tube 380 to the tube 376 or 377, it may be connected directly with the coupling 374, the sound-conveyer 375 being omitted. This has the advantage of diminishing the length of tube between the reproducer and the ear of the listener, but is open to the objection that the reproducer is liable to be pulled from the machine by incautious movements on the part of the listener.

It may be observed that the reproduced sound may be listened to in various ways, and that it is possible to perceive the sounds by applying the ear close to the reproducer itself.

In the modified form of reproducer shown in Fig. 15 the style 382 is made of a thin plate of sheet-steel—say three one-thousandths of an inch in thickness—of the form clearly shown, fastened on edge on the spring 359, being soldered in a slit in the ear 383, and a similar slit in the end of the metal buttons 384, which end projects through the spring 359. This button bears upon the hard-rubber diaphragm 362, and serves to communicate vibrations from the style to it.

In the form of reproducer shown in Fig. 17 the style 390 is interposed between the diaphragm 362 and the flat spring 391. Near each end the style has a rounded shoulder, and the ends themselves are of smaller diameter, so that they may pass through holes in the diaphragm and spring, as shown, the latter pressing upon the shoulders. The spring 391, whose flat side is toward the diaphragm, is attached to the strip 392, which is soldered or otherwise fastened to the post 393. The spring

791 retains the outer or operating end of the style in place while allowing it freedom to move endwise for impressing vibrations upon the diaphragm. Preferably it exerts a light pressure inward, tending to strain the diaphragm, as well as maintain itself in contact with the shoulder on the style. It supplies the place of spring 389 of Figs. 11 and 15. The strip 392, whose edge is turned toward the diaphragm, allows the operating end of the style to move sidewise. It thus supplies the place of strip 388 of Fig. 11, and that which forms the style 382 of Fig. 15.

The construction of Fig. 17 has the advantage over the other forms that there is less material to be moved by the vibrations of the style.

The parts 391 and 392 can most conveniently be made from a round wire by filing the same flat at proper points.

The operation of the machine has practically been explained in the foregoing description in connection with the several parts of the machine, but an explanation will now be given of the operation as a whole. Having prepared a hollow paper cylinder and coated it with the paraffine and beeswax composition, the coated cylinder 318 (which forms the recording-tablet) is placed upon the tablet-holder 305, which for that purpose is detached at one end by releasing the catch 311, and tipped up, as indicated in dotted lines in Fig. 5. The detached end of the tablet-holder is then returned to its bearings in side piece, 301. Having adjusted the rest 329 of the recorder so that the recording-style 326 projects beyond the enlargement 332 the desired distance—say five one-thousandths ($\frac{5}{1000}$) of an inch—the recorder-carrier 333 is placed on the feed-screw 334, near the left end of the same, the guard-block 335 is turned under the screw, and the recorder is made to rest against the recording-tablet, the weight being supported by the rest 329, and the style 326 penetrating the wax coating. The fly-wheel 317 is then turned, revolving the tablet-holder and tablet, and also, but at a less speed, the feed-screw 334. Since the recorder is moved lengthwise of the tablet as the latter is revolved under it, the recording-style traces, or more specifically cuts, in the wax coating a spiral groove whose convolutions are closer together than the threads of the feed-screw. The convolutions may be eight one-thousandths ($\frac{8}{1000}$) of an inch apart. To make a speech record in or on the tablet, the speaker places the lower part of his face in the mouth-piece 338 and says in a clear and moderately loud voice the words to be recorded, the fly-wheel being kept in motion at a uniform speed of say one hundred and sixty revolutions per minute. If it be desired to mark visibly a paragraph on the record, it can be done by lifting the recorder for a short time from the record, then releasing it, and again speaking into the mouth-piece. The sonorous vibrations which the speaker impresses upon the air in the mouth-piece 338 and tube 339 are taken up by the diaphragm 320 and style 326, and the latter cuts a groove in the tablet, which is correspondingly irregular. After the record has been cut over the whole tablet, or over as much as may be desired, the recorder is removed. The tablet is also removed and brushed to remove the wax shavings, and then, or at some future time, is replaced on the tablet-holder of the same or of a similar machine. The reproducer-carrier 360 is placed on the feed-screw 334, the tail 372 resting on the tie-bar 348. The thumb-piece 369 of the reproducer-standard is pressed upon to keep the style 387 or 382 from contact with the record until the carrier has been placed on the screw. It is then released, and the reproducer, falling forward, brings the style into contact with the record. Preferably the grooves are so close together that the ridge between them tapers to an edge on top, so that no matter where the reproducer may be placed the style will enter a groove, and being free to move sidewise will, owing to the sloping sides of the groove, penetrate to the bottom thereof under the action of gravity. The fly wheel being turned at about the speed used in recording, the reproducer will follow the spiral groove cut by the recorder, and will be acted upon by the inequalities or irregularities of the record, and made to reproduce sounds or sonorous vibrations similar to those which acted upon the recorder to produce said inequalities or irregularities in the groove. Each elevation as it passes under the style at first presses the latter outward, and, when the top of the elevation is reached, allows it to be returned inward by the tension of the diaphragm and spring, or of the diaphragm alone. By these alternating movements, repeated for each ascent and descent in the record, and corresponding in extent and rapidity with the length and slope of the ascent and descent, the diaphragm is thrown into vibrations corresponding in form to the sonorous vibrations which caused the irregularities or inequalities. In addition to these vibrations, foreign vibrations, due to various causes, are also impressed upon the diaphragm. These should be disregarded, as far as possible, by the listener confining his attention to the speech-vibrations. They will (in the reproducer shown in Figs. 11 and 12) be measurably taken up by the vibration independently of the diaphragm 362 of the tongue formed by the end of the spring 359, which projects beyond the block 363.

In certain speech-sounds it is found that the diaphragm responds too sluggishly, and that in consequence of this sluggishness the style, if influenced by the diaphragm alone, will not descend to the bottom of a depression in the groove, but will skip across, thus cutting off more or less of the vibration. The tongue of the spring 359 responds more readily than the diaphragm and diminishes the danger of false vibrations. This spring-tongue also absorbs a portion of the speech-vibrations, thus dimin-

ishing the loudness of the reproduced sound; but any loss in this respect will be more than balanced by the improvement in distinctness. The vibrations of the diaphragm being impressed upon the air in the chamber behind the same are conveyed through the standard 365, the uprights 368, the coupling 374, the flexible tube 375, the tube 304, the tube 376 or 377, the tube 380, and the branches 378 to the ears of the listener. Should it be desired to interrupt the reproduction for a time, the tie-bar 348 is pressed lightly, thereby withdrawing the intermediate 345 from contact with the pinion 343 and stopping the rotation of the feed-screw 334. At the same time the reproducer-carrier 366 is allowed by the depression of the tie-bar to turn sufficiently to lift the reproducer-style 357 clear of the record, the front stop, 370, coming in contact with the standard 365 and raising the same. Should one or more words, phrases, or sentences not be understood, the tie-bar 348 is pressed more strongly, so as to bring the wheel 351 into engagement with the pinion 343, and thereby reverse the rotation of the feed-screw. When the reproducer has been carried back beyond the part of the record from which the reproduction was not understood, the tie-bar 348 is released, the style again comes into contact with the record, and the reproduction commences at the point to which the reproducer has been brought back. This repetition of what is not understood can be made as often as desired.

Friction-wheels for communicating motion to the feed-screw are preferred to cog or other toothed gearing, (which could of course be used without departing from the invention,) notwithstanding their liability to slip, because they run smoother and are more easily engaged and disengaged. A slip between the wheels causes the reproducer to be fed faster or slower than the spiral on the tablet permits the style to advance. As a general thing, there is more slip in recording than in reproducing, and consequently the reproducer outruns the style slightly. The style should be given enough side play to compensate for this difference in speed; but if not given the only difficulty is that the style will at length slip across the ridge between the grooves, and thus escape the action of a portion of the record, so that it may be necessary to bring back the reproducer by reversing the feed. The loudness of the reproduction is limited as desired by turning the stop-cock 387 to the desired extent.

In the foregoing description of the machine shown in the drawings, dimensions, proportions, materials, and other details of construction are mentioned with particularity for the purpose of enabling others more readily to make and use the new improvements, and not as limitations of the said improvements, since it is obvious that modifications can be made in details without departing from the spirit of the invention, and that parts of the invention can be used separately.

The terms "recorder" and "reproducer" as used herein include simply means (a style, for example) for acting upon a tablet to form a sound-record, or being acted upon by a sound-record, in connection with means whereby sonorous vibrations can be impressed upon the recording-style or its substitute, or can be received from the reproducing-style or its substitute, and such frame or support as may be necessary to an operative device. As hereinafter employed, they mean a recorder or reproducer of any ordinary or suitable description unless a special form is mentioned, or is necessarily implied from the connection in which the recorder or reproducer is used. For example, some forms of recorder and reproducer would not be suitable for use with a wax-coated tablet. In like manner other terms—such as "tablet," "tablet-holder," "carrier," "sound-conveyer," "gearing," &c.—refer to devices of any ordinary or suitable description, except as otherwise indicated.

The present invention is to be considered as an improvement upon or modification of what is shown and described in the application for Letters Patent of C. A. Bell and myself, filed June 27, 1885, and officially numbered 170,044, so far as they relate to common features, and no claim is made herein to any matter described and shown in that application.

Having now fully described my said invention and the manner in which the same is or may be carried into effect, what I claim is—

1. A recording-tablet for a phonograph, consisting of a hollow cylinder provided with a wax or wax-like coating for receiving the sound-record, substantially as described.

2. A recording-tablet consisting of a hollow cylinder of paper provided with a wax or wax-like coating, substantially as described.

3. The recording-tablet consisting of a hollow paper cylinder coated with a composition of beeswax and paraffine, substantially as described.

4. A tubular self-sustaining tablet for recording sounds or sonorous vibrations, substantially as described.

5. In a phonograph and in combination with a sound recorder or reproducer and operating mechanism for causing the said recorder or reproducer to trace a spiral line on the tablet, an elongated cylindrical tablet-holder supported and journaled so that the tubular tablet can be placed on the same, substantially as described.

6. The combination, with a tubular tablet, of the tablet-holder for supporting and rotating the same, substantially as described.

7. A tablet-holder journaled in bearings at both ends and detachable from its support at least at one end, so that a tubular tablet can be slipped over the same, in combination with a sound recorder or reproducer, and operating mechanism for causing the said recorder or reproducer to trace a spiral line on the tablet, substantially as described.

8. A tablet-holder detachably connected with its support at one end and provided at the other end with a ball-and-socket bearing, or bearing which permits the said holder to be tilted for placing a tubular tablet on the same, in combination with a sound recorder or reproducer and operating mechanism for causing said recorder or reproducer to trace a spiral line on the tablet, substantially as described.

9. The combination, with the tablet-holder, the side piece or support at one end of the same, and the cap therefor, of the catch or fastening for said cap and the spring for moving the tablet-holder when the catch is released, substantially as described

10. The combination, with the tablet-holder and the ball-and-socket bearing or bearing for permitting the holder to be tilted, of the support and cap at the opposite end of said holder, the catch or fastening for said cap, and the spring lifting the journal from said support when the catch or fastening is released, substantially as described

11. The combination, with the tablet-holder, of the box or sleeve on one journal of the same, the support and cap forming the bearing for said box or sleeve, and the catch or fastening for the cap, substantially as described.

12. The combination, with the tablet-holder, of the box or sleeve held on one journal of the same, the support and cap forming a bearing for said box or sleeve, and the spring whose pressure acts against said box or sleeve, substantially as described.

13. The combination, with the tablet-holder, of the ball-journal and socket-bearing at one end of said holder, the box or sleeve on the journal at the opposite end of said holder, and the bearing for the same, substantially as described.

14. The combination, with the tablet-holder, the sound-recorder, and the feed-screw, of gearing between said holder and feed-screw for revolving the latter at a slower speed than the former, substantially as described.

15. The combination, with the tablet-holder, sound recorder or reproducer, feed-screw, and gearing for revolving the screw, of the carrier for the recorder or reproducer provided with a divided or partial nut for engaging said screw, substantially as described.

16. The combination, with the feed-screw and the carrier for engaging the same, of the movable guard for retaining the carrier in engagement with the screw, substantially as described.

17. The combination, with a feed-screw and a sound recorder or reproducer, of the carrier for the sound recorder or reproducer engaged and also supported by said screw, substantially as described.

18. The combination, with a feed-screw and a sound recorder or reproducer, of the carrier for the recorder or reproducer movable lengthwise of and engaged by said screw and capable of turning on the same as on a journal, substantially as described.

19. The combination, with a tablet and a tablet-holder, of the feed-screw, a carrier mounted on said screw, and the recorder supported on said carrier and resting against the tablet, substantially as described.

20. The combination, with the tablet-holder, feed-screw, and gearing between the same, of the hinged frame upheld by spring-pressure and the devices connected therewith for putting the feed-screw out of action when the said frame is depressed, substantially as described.

21. The combination, with a tablet-holder, feed-screw, and gearing between the two, of the hinged frame upheld by spring-pressure and reversing mechanism connected with said frame for reversing the rotation of the feed-screw relatively to the rotation of the tablet-holder, substantially as described.

22. The combination, with a tablet-holder, a feed-screw, gearing, and an instrument—the reproducer, for example—engaged by said screw, of stop mechanism for putting the feed-screw out of action and at the same time lifting the instrument clear of the tablet, substantially as described.

23. The combination, with a tablet, a tablet-holder, a feed-screw, gearing, and an instrument—the reproducer, for example—engaged by said screw, of reversing mechanism for reversing the rotation of the feed-screw, the said mechanism being connected with said instrument, so that the latter will be lifted clear of the tablet on the reversal of the feed-screw, substantially as described.

24. The combination, with the tablet and the recorder held against the same by yielding pressure, of a rest bearing on said tablet for supporting the recorder, substantially as described.

25. The combination, with the recorder frame and style and the means whereby sonorous vibrations are impressed upon the style, of the rest attached to said frame and arranged close to said style, the latter projecting beyond the rest to act upon the recording-tablet, substantially as described.

26. The combination, with the recorder, of the adjustable rest attached to said recorder for bearing upon the recording-tablet, substantially as described.

27. The combination, with the recording-style, the recorder-frame, and the means whereby vibrations are impressed upon the style, of the rest attached to said frame and adjustable lengthwise of said style, substantially as described.

28. The combination, with the recorder-frame and the rest attached thereto, of the diaphragm and the recording-style mounted directly on said diaphragm, substantially as described.

29. The combination, with the diaphragm, of the cutting-style formed of a wire sharpened at its outer end and carried by said dia-

phragm so as to vibrate with the same, substantially as described.

30. The combination, with the diaphragm, of the cutting-style provided with a screw-threaded shank, and the nut and washer for securing the same to the diaphragm, substantially as described.

31. The combination, with a recorder having a cutting-style, of the rest for bearing upon the recording-tablet, substantially as described.

32. The combination, with the tablet having a wax or wax-like coating to receive the record, of the recorder pressed toward the tablet by yielding pressure and provided with a cutting-style and the rest for bearing upon the tablet and supporting said pressure, substantially as described.

33. The combination, with the recorder, of the sound-concentrator comprising a flaring mouth-piece and a tapering tube forming a continuation of the same, substantially as described.

34. The combination, with the recorder, of the sound-concentrator comprising a mouth-piece of elliptical form and a tapering tube forming a continuation of the same, substantially as described.

35. The combination, with the reproducer, of the brush for clearing the record in advance of the reproducer, substantially as described.

36. The combination, with the recording-tablet having a wax or wax-like coating in which the record is cut, of the reproducer and the brush for clearing the record in advance of the reproducer, substantially as described.

37. A recording-tablet consisting of a hollow cylinder provided with a wax or wax-like coating and having a sound-record cut in said coating, substantially as described.

38. The combination, with the tablet and tablet-holder, of the feed-screw, the gearing, the reproducer-carrier, and the brush, substantially as described.

39. A reproducer having a flexible or flexibly-mounted style movable sidewise independently of the diaphragm or device to which the style communicates vibration, substantially as described.

40. A reproducer having the style attached to or in one piece with a comparatively broad and thin strip placed on edge, said style in consequence of the flexibility of said strip being movable sidewise independently of the diaphragm or device to which the style communicates vibration, but in consequence of the breadth of said strip being practically rigid to pressures in other directions, substantially as described.

41. The combination, with the reproducer-style and diaphragm or device to which said style is to communicate vibrations, of a comparatively broad and thin strip placed on edge and attached to or in one piece with said style, said strip being hinged to the frame, so that the style may be vibrated in the plane of said strip, substantially as described.

42. In a reproducer, the style attached to a thin metal strip breadthwise of the same like a hammer-head, substantially as described.

43. The reproducer-style attached to or in one piece with a broad and thin strip, in combination with a diaphragm or device upon which the reproduced sonorous vibrations are to be impressed and a spring carrying said style and strip, and serving as a hinge to permit them to vibrate, substantially as described.

44. The combination, with the reproducer-style and the diaphragm or device upon which the reproduced sonorous vibrations are to be impressed by said style, of a flat metal spring interposed between the style and diaphragm and forming a yielding connection, through which the reproduced vibrations are transmitted, said spring having a practically rigid connection with the diaphragm, substantially as described.

45. The combination, with the reproducer-style and the diaphragm or device upon which the reproduced vibrations are to be impressed by said style, of a metal spring or spring-tongue whose normal vibration is quicker than that of said diaphragm, and whose tension tends to move the style away from the diaphragm, substantially as described.

46. In combination with a diaphragm, a frame having a concave seat for said diaphragm, the walls of said seat converging to an opening in the back, through which the sound may escape, substantially as described.

47. The combination, with the diaphragm and the frame having a concave seat for said diaphragm, of a spring for holding the diaphragm to its seat and for straining the same, substantially as described.

48. The combination, with the diaphragm, its supporting-frame, and the style, of the spring for straining said diaphragm, substantially as described.

49. The combination, with the diaphragm and its supporting-frame, of the spring pressing inward on said diaphragm and the style carried by said spring, substantially as described.

50. The combination, with the diaphragm and its frame, of the spring projecting over said diaphragm, the block between the spring and diaphragm, and the style bearing upon the spring beyond said block, substantially as described.

51. The combination, with the reproducer-style, of the hard-rubber diaphragm and the frame for supporting said diaphragm at the edges, substantially as described.

52. The combination, with a diaphragm and its frame, of a spring projecting over said diaphragm, a style carried by said spring, and a block between the diaphragm and spring, adjustable lengthwise of the latter, substantially as described.

53. The combination, with the reproducer, of the guard fastened over the face of the same, substantially as described.

54 The reproducer provided with a guard

fastened over the face of the same, and curved to form horns upon which the reproducer may rest, substantially as described.

55. The double ear-piece, comprising the elastic and flexible hollow branches provided each with a cup connected with the branch by a ball-and-socket joint, substantially as described.

56. The combination, with the reproducer and the carrier therefor and the feed-screw for moving them, of a sound-conveying tube on the machine-frame and a flexible sound-conveyer between the reproducer and the said tube, substantially as described.

57. The combination, with the reproducer, of the double ear-piece comprising the elastic and flexible hollow branches and the cups jointed to the ends of said branches, substantially as described.

58. The combination, with the feed-screw and the reproducer-carrier supported and capable of turning on said screw, of the reproducer hinged to said carrier and a stop for lifting the reproducer when the carrier is turned in the proper direction, substantially as described.

59. The combination, with the feed-screw and the reproducer-carrier engaging and capable of turning on said screw and provided with an extension or tail, of a movable bar under said tail for upholding the same, so that by depressing said bar the carrier can be turned and lift the reproducer from the tablet, substantially as described.

60. The combination of the feed-screw, the reproducer-carrier mounted thereon and provided with an extension or tail, and the bar under said tail for upholding the same, substantially as described.

61. The combination, with the reproducer-carrier, of the reproducer mounted on a standard hinged to said carrier, said standard being provided with a thumb-piece or device, whereby the reproducer can be held up in placing the reproducer on and in removing it from the machine, substantially as described.

62. The combination, with the tablet, tablet-holder, feed-screw, gearing, reproducer, and reproducer-carrier, of the mechanism for controlling the rotation of said feed-screw the same being connected with said carrier so as to lift the reproducer from the tablet when operated to stop or to reverse the rotation of said screw, substantially as described.

63. The combination, with the tablet-holder and the feed-screw, of the gearing for rotating the feed-screw in the forward direction, the hinged frame for disengaging said gearing when moved a certain distance, and additional wheels connected with said frame, so as by a further movement to engage said wheels and reverse the rotation of said screw, substantially as described.

64. The combination, with the sound recorder or reproducer, the tablet, the tablet-holder, the feed-screw, the gearing for rotating the same in a forward direction, the gearing for rotating the same backward at a greater speed, and mechanism for bringing the latter into action, substantially as described.

65. The combination, with the reproducer and a conveying-tube for the reproduced sounds, of a stop-cock in said tube for moderating at will the loudness of the sounds to be conveyed to the ear, substantially as described.

66. The herein-described improved recording and reproducing machine, comprising the following elements in combination: a hollow cylindrical self-sustaining tablet, a tablet-holder journaled and hinged at one end to the machine-frame and journaled and detachably connected with said frame at the other, a feed-screw, gearing for rotating the said screw in either direction according to the wheels engaged, a hinged frame for controlling the rotation of said screw, and the recording and reproducing instruments with their carriers, substantially as described.

In testimony whereof I have signed the foregoing specification in the presence of two subscribing witnesses.

SUMNER TAINTER.

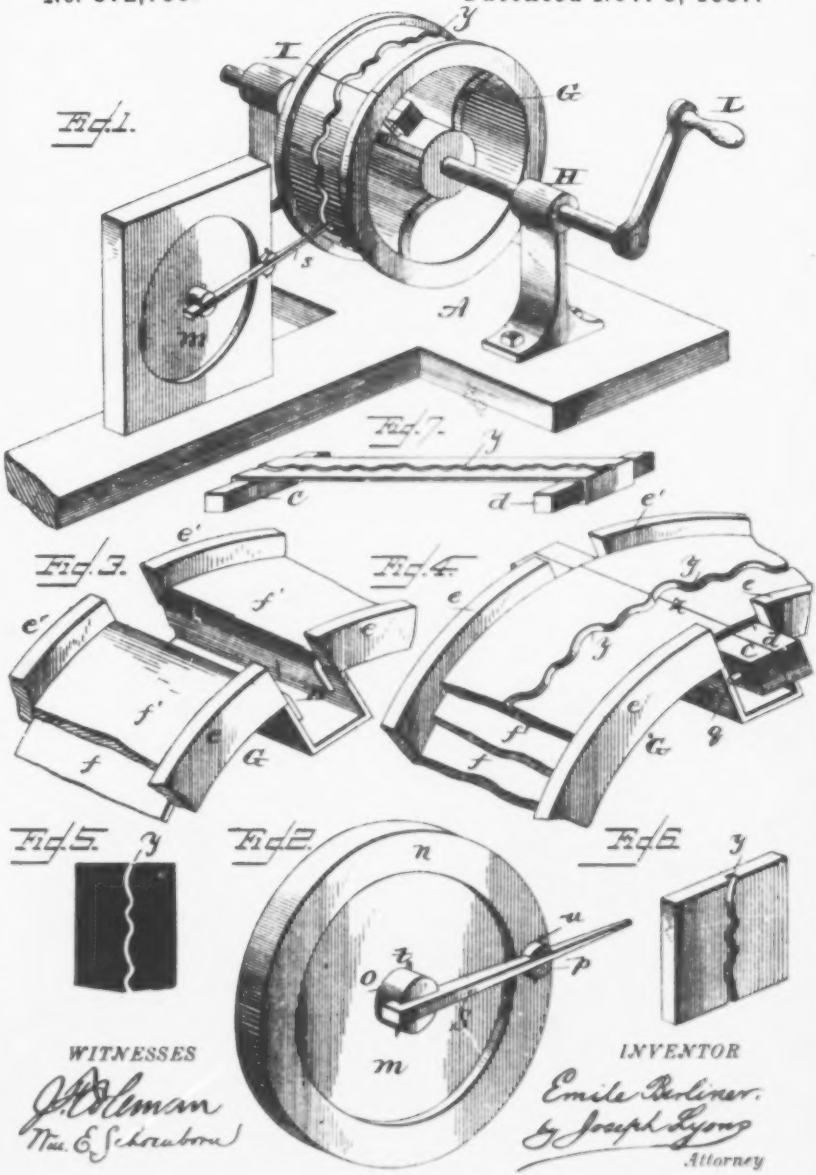
Witnesses:
PHILIP MAURO,
O. J. HEDRICK.

416
(No Model.)

E. BERLINER.

GRAMOPHONE.

No. 372,786 Patented Nov. 8, 1887.



WITNESSES

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GRAMOPHONE.

SPECIFICATION forming part of Letters Patent No. 372,786, dated November 8, 1887.

Original application filed May 4, 1887, Serial No. 237,060. Divided and this application filed September 26, 1887. Serial No. 250,731. (No model.)

To all whom it may concern:

Be it known that I, EMILE BERLINER, a citizen of the United States, residing at Washington, in the District of Columbia, have invented certain new and useful Improvements in Gramophones, of which the following is a specification.

This invention has reference to a novel method of and apparatus for recording and reproducing all kinds of sounds, including spoken words, and is designed to overcome the defects inherent in that art as now practiced and in the apparatus used therefor.

By the ordinary method of recording spoken words or other sounds for reproduction it is attempted to cause a stylus attached to a vibratory diaphragm to indent a traveling sheet of tin-foil or other like substance to a depth varying in accordance with the amplitudes of the sound-waves to be recorded. This attempt is necessarily more or less ineffective, for the reason that the force of a diaphragm vibrating under the impact of sound-waves is very weak, and that in the act of overcoming the resistance of the tin-foil or other material the vibrations of the diaphragm are not only weakened, but are also modified. Thus while the record contains as many undulations as the sounds which produce it, and in the same order of succession, the character of the recorded undulations is more or less different from those of the sounds uttered against the diaphragm. There is, then, a true record of the pitch, but a distorted record of the quality of the sounds obtained. The simple statement that the material upon which the record is made resists the movement of the diaphragm is not sufficient to explain the distortion of the character of the undulations, for if that resistance were uniform, or even proportional to the displacement of the stylus, the record would be simply weakened, but not distorted; but it is a fact that the resistance of any material to indentation increases faster than the depth of indentation, so that a vibration of greater amplitude of the stylus meets with a disproportionately greater resistance than a vibration of smaller amplitude. For this reason loud sounds are even less accurately recorded than faint sounds, and the individual voice of a loud speaker record, and then reproduced by the phonograph cannot be recognized. With a view of overcoming this defect it has been attempted to engrave instead of indent a record of the vibrations of the diaphragm by employing a stylus shaped and operating like a chisel upon a suitably-prepared surface; but even in this case the disturbing causes above referred to are still present. In addition to this, if in the apparatus of the phonograph or graphophone type it is attempted to avoid the disturbing influence of the increase of resistance of the record-surface with the depth of indentation or cut as much as possible by primarily adjusting the stylus so as to touch the record-surface only lightly, then another disturbing influence is brought into existence by the fact that with such adjustment, when the diaphragm moves outwardly, the stylus will leave the record-surface entirely, so that part of each vibration will not be recorded at all. This is more particularly the case when loud sounds are recorded, and it manifests itself in the reproduction, which then yields quite unintelligible sounds.

It is the object of my invention to overcome these difficulties by recording spoken words or other sounds without perceptible friction between the recording-surface and the recording-stylus, and by maintaining the unavoidable friction uniform for all vibrations of the diaphragm. The record thus obtained, almost frictionless, I copy in a solid resisting material by any of the methods hereinafter described, and I employ such copy of the original record for the reproduction of the recorded sounds.

Instead of moving the recording-stylus at right angles to and against the record-surface, I cause the same to move under the influence of sound-waves parallel with and barely in contact with such surface, which latter is covered with a layer of any material that offers a minimum resistance to the action of a stylus operating to displace the same, all substantially in the manner of the well-known phonautograph by Leon Scott. All this will more fully appear from the following detailed description, in which reference is made to the accompanying drawings, which illustrate one of the numerous forms which my improved apparatus may assume, and in which—

Figure 1 is a perspective view of my recording and reproducing apparatus; Fig. 2, a like

view of the recording and reproducing diaphragm with its stylus; Fig. 3, a similar view of a portion of the support for the record-surface; Fig. 4, the same view with the record-surface applied; Fig. 5, a plan view of a phonautographic record; Fig. 6, a perspective of a phonautographic record copied in solid resisting material; and Fig. 7, the copied record mounted, ready for application to the support.

The general arrangement of the parts is best illustrated in Fig. 1, in which a T-shaped base-plate, A, is shown, upon which two standards, H I, serving as journal-bearings for the shaft of drum G, are mounted. The drum G may be constructed with flanges *c c'*, which project beyond the cylinder-surface *f*, and from the edges of a gap, B, left upon the cylinder-surface extend the side walls of box K, as shown. A thin layer of felt or other yielding elastic substance is placed upon the cylinder-surface and is bent over the edges of the gap and secured to the side walls of the box K. This layer of elastic material is designed to serve as the support for the record-surface both in recording and reproducing.

For recording I employ a thin strip of paper, parchment, metal, or any other suitable substance, which is secured at both ends to bars *c d*, in the manner shown in Fig. 7, with reference to a copy of a record, and is then placed upon the elastic support *f'*, with the bars *c d* entering into but projecting at both end beyond the box K, as illustrated in Figs. 1 and 4, with reference to an engraved copy of a record. Bolts *q*, passing through the projecting ends of bars *c d*, are employed to draw the record strip tightly about the drum, and the length of the strip is such that the ends of the same meet as nearly as practicable upon a straight line, *z*. The record-sheet is then prepared to receive the record by covering its surface with a thin layer of any substance which is easily removed by the action of the recording-stylus. I may use lamp-black, which is deposited by placing a smoky flame under the record-strip and by slowly turning the drum until all parts of the strip are covered with the deposit. It is well known that a layer of lamp-black thus deposited, while it adheres well to the surface of a solid body, is nevertheless easily removed from the same. It requires only an exceedingly small force to draw a plainly-visible line upon such surface, owing to the fact that the spicules of carbon of which lamp-black is composed are only loosely superimposed upon each other, and are exceedingly light. All this has long since been recognized and utilized in the production of phonautographic records, and I take advantage of these facts in my improved method of recording and reproducing sounds.

The diaphragm *m* is mounted in a frame, *n*, with its plane at right angles to the axis of drum G. A post, O, is fixed to the center of the diaphragm, and a slot in said post receives one end of stylus S, which is pivoted in the post by a pin, *t*. The stylus extends over and beyond the frame, with its free end barely in contact with the record-surface, and is also pivotally supported in a slot in a post, *p*, secured to the frame by means of a pin, *u*, as shown in Figs. 1 and 2. It will now be seen that the stylus is in effect a lever having its fulcrum in the pin *u*, and that its free end can only move in lines practically parallel to the record-surface. If it is now desired to produce a record of sounds the drum is slowly and uniformly rotated by means of crank L, or by any other suitable means, and sounds are uttered or directed against the diaphragm. Under the impact of the sound-waves the diaphragm is set into vibrations, whereby the free end of the stylus is also caused to vibrate to the right and left of its normal position, removing at the same time an undulating line, *y*, of lamp-black from the record-surface, as indicated, greatly exaggerated, in Fig. 5. Since in this operation the stylus only penetrates a uniform layer of loosely-heaped carbon spicules and barely touches the record-surface, it is clear that the slight friction at the free end of the stylus will be uniform, whatever be the amplitude of vibration. Consequently the vibrations of the diaphragm will not be modified or changed by the reaction upon the same of a sensible and varying resistance, as is the case in all other mechanical sound-recorders.

Having thus obtained an accurate phonautographic record, the same may be fixed by applying a thin solution of varnish of any kind which dries very rapidly and which does not obliterate or change the record.

If in this process the deposit of lamp-black be made thick enough, the line drawn by the stylus would represent a groove of even depth, preserving all the characteristics of the sounds which produced it and which may be handled and touched with impunity. The latter is then removed from the drum and may be preserved any length of time without danger of its being disfigured. This record I then copy in solid resisting material, preferably metal, either by the purely mechanical process of engraving, or by chemical deposition, or by photo-engraving. I prefer the last-named process, which enables me to produce the most accurate copy of the original record in copper, nickel, or any other metal without in any way or manner affecting the original record. The copy thus obtained, which may be multiplied to any desired extent, is a grooved wave-line upon a strip or sheet of copper or other metal, as shown in Figs. 1, 4, 6, and 7, and for the reproduction of the recorded sounds it has the advantage over the ordinary records in tin-foil, wax, &c., that it is not sensibly attacked by the reproducing-stylus, and will stand an indefinite number of reproductions without the slightest variation in the accuracy and loudness of the reproduced sounds.

The copied record is fixed at both ends to the bars *c d*, as shown in Fig. 7, and is placed

upon the elastic support f' upon the drum in the same manner as has been described with reference to the original record-strip, and as is illustrated in Figs. 1 and 4. Care must be taken that the two ends of the undulatory groove y meet exactly, as will be readily understood. This condition of the apparatus is shown in Fig. 1 with the engraven record upon the drum and the free end of the stylus entering the undulatory groove. If, now, the drum is rotated with uniform speed, the end of the stylus will be forced to follow the undulations of the groove y, and the diaphragm will be vibrated positively in both directions in strict accordance therewith, and will therefore reproduce the exact sounds which originally produced the record. This peculiarity of positive vibratory movement in both directions of the diaphragm is a feature which also distinguishes my method and my apparatus from others heretofore used.

In the phonograph and graphophone the end of the reproducing-stylus which bears upon the indented or engraved record has a vertical upward and downward movement. It is forced upwardly in a positive manner by riding over the elevated portion of the record, but its downward movement is effected solely by the elastic force of the diaphragm, which latter is always under tension. In my improved apparatus the stylus travels in a groove of even depth and is moved positively in both directions. It does not depend upon the elasticity of the diaphragm for its movement in one direction. This I consider to be an advantage, since by this method the whole movement of the diaphragm is positively controlled by the record, and is not affected or modified by the physical conditions of the diaphragm, which conditions necessarily vary from time to time and constitute some of the causes of imperfect reproduction of recorded sounds.

In practicing my method of recording and producing sounds I am not limited to the use of the identical apparatus herein shown and described. This apparatus may be varied indefinitely without seriously impairing its utility for the purposes in view. Thus it is not absolutely necessary that a diaphragm should be used for receiving the impact of sound-waves in recording and for remitting sounds in reproducing. Any sonorous body of whatever shape and material may be used in lieu of a diaphragm proper. The recording surface need not be mounted upon a drum, but may be supported in any suitable manner upon a support of any description which is adapted to move the same under the stylus evenly and with approximately uniform speed. Nor do I confine myself to the use of lamp-black as a substratum for the phonautographic record, although I have found this substance to yield excellent results. Any other substance which adheres well to the support and may at the same time be removed from the same with a minimum force may be employed.

While I have found the process of photo-engraving to yield admirable copies of the phonautographic record, I do not mean to confine myself to this process to the exclusion of other processes for copying and multiplying the original record in solid resisting material; and it will be readily understood that the details of construction of my apparatus and the manipulations of the same may be greatly changed without departing from the fundamental idea of my invention.

I do not herein claim the apparatus shown and described, either generically or specifically, as a whole or in part, since the same forms the subject of another application for patent previously filed by me and of which this is a division.

What I do claim, and desire to secure by Letters Patent, is—

1. The method or process of recording and reproducing spoken words and other sounds, which consists in first drawing an undulatory line of even depth in a traveling layer of non-resisting material by and in accordance with sound-vibrations, then producing the record thus obtained in solid resisting material, and finally imparting vibrations to a sonorous body by and in accordance with the resisting record substantially as described.

2. The method or process of reproducing sounds recorded phonautographically, which consists in copying the phonautographic record in solid resisting material, and then imparting vibrations to a sonorous body by and in accordance with the copy of the orignal record, substantially as described.

3. The method or process of reproducing sounds recorded phonautographically, which consists in copying the phonautographic record in solid resisting material by the process of photo engraving, and then imparting positive to and fro movements to a sonorous body by and in accordance with the copy of the original record, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

EMILE BERLINER.

Witnesses:
JULIUS SCHGER,
JACOB G. COHEN.

420
(No Model.)

6 Sheets—Sheet 1.

C. S. TAINTER.

APPARATUS FOR RECORDING AND REPRODUCING SPEECH AND OTHER SOUNDS.

No. 375,579. Patented Dec. 27, 1887.

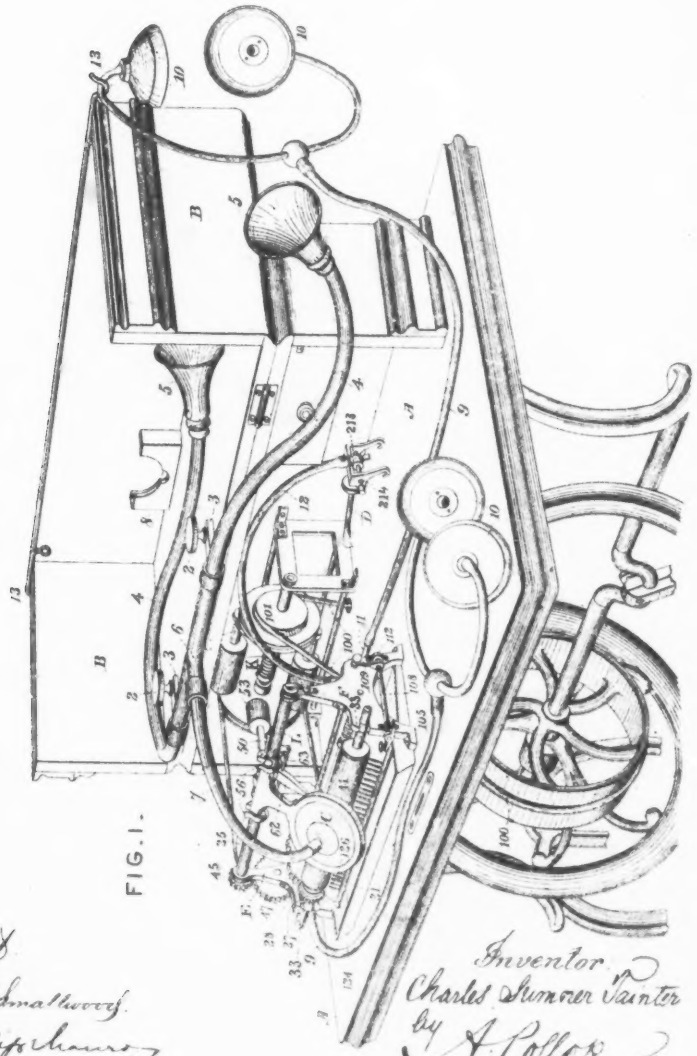

FIG. 1.

Attest
Geo. T. Smallwood.
Philip Mauro.

Inventor
Charles Sumner Tainter
by A. Pollok
his attorney.

421
(No Model.)

6 Sheets—Sheet 2.

C. S. TAINTER.

APPARATUS FOR RECORDING AND REPRODUCING SPEECH AND OTHER SOUNDS.

No. 375,579. Patented Dec. 27, 1887.

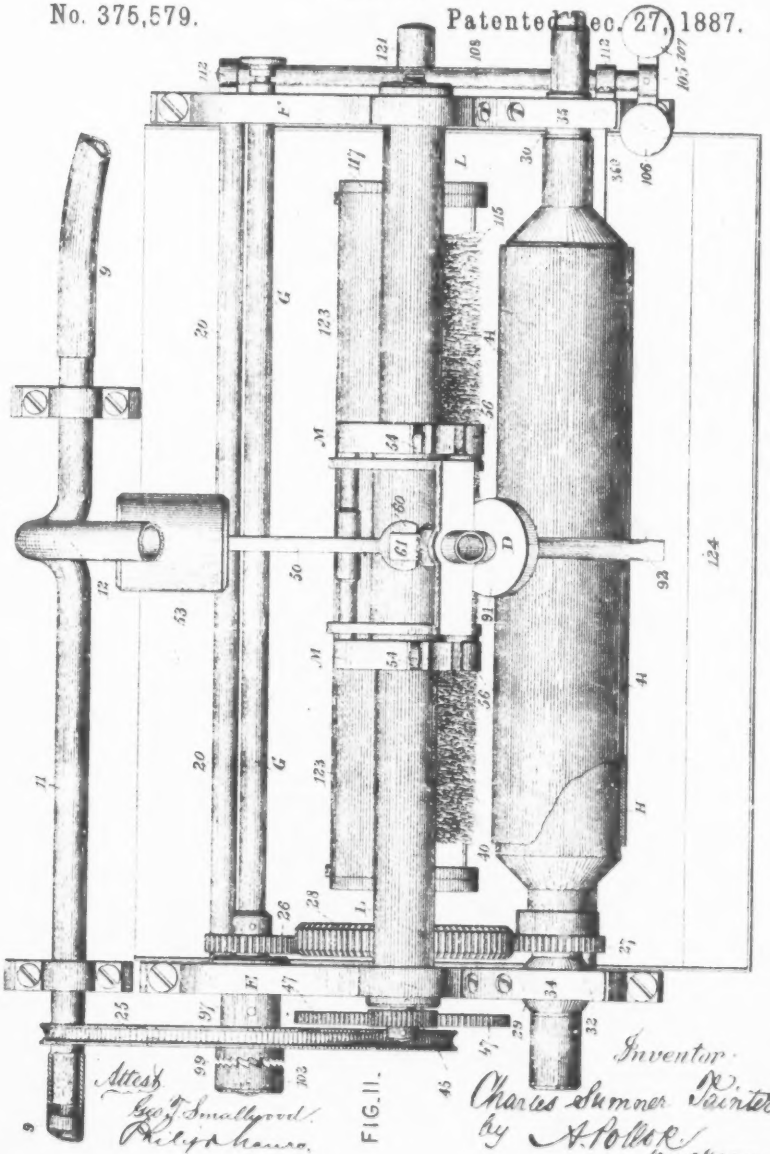

FIG. II.

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422
(No Model.)

6 Sheets—Sheet 3.

C. S. TAINTER.

APPARATUS FOR RECORDING AND REPRODUCING SPEECH AND OTHER SOUNDS.

No. 375,579. Patented Dec. 27, 1887.

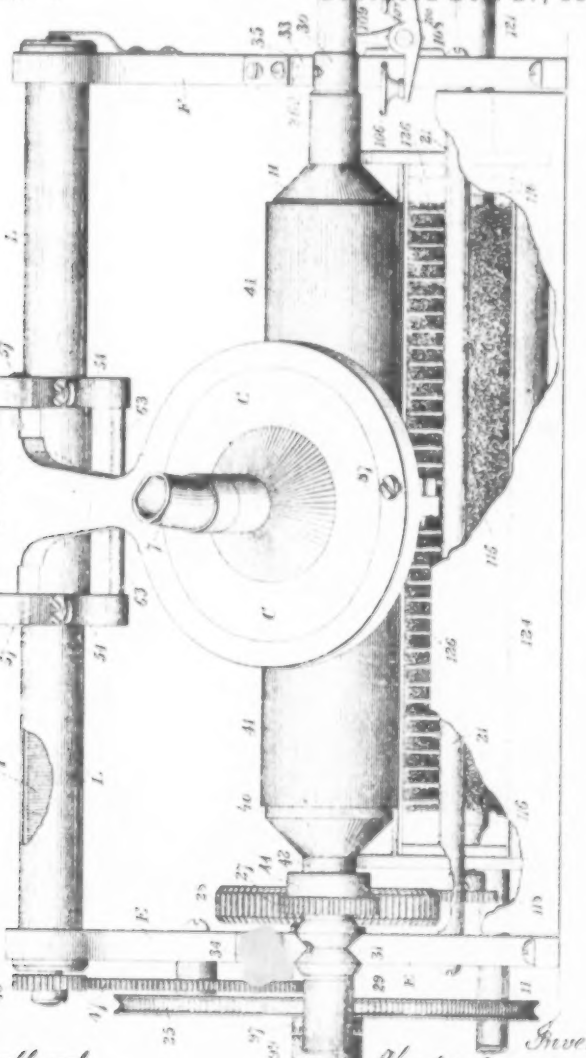

FIG. III.

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(No Model.)

6 Sheets—Sheet 4.

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APPARATUS FOR RECORDING AND REPRODUCING SPEECH AND OTHER SOUNDS.

No. 375,579. Patented Dec. 27, 1887.

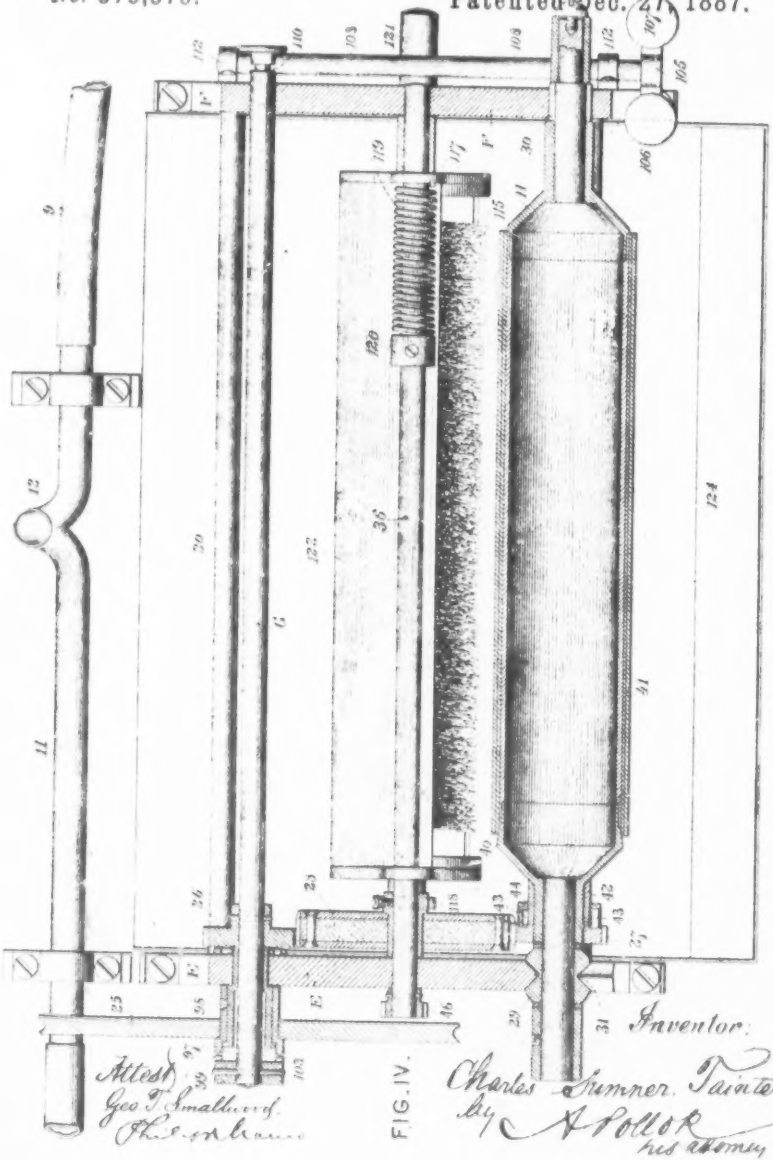

FIG. IV.

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2
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424
(No Model.)

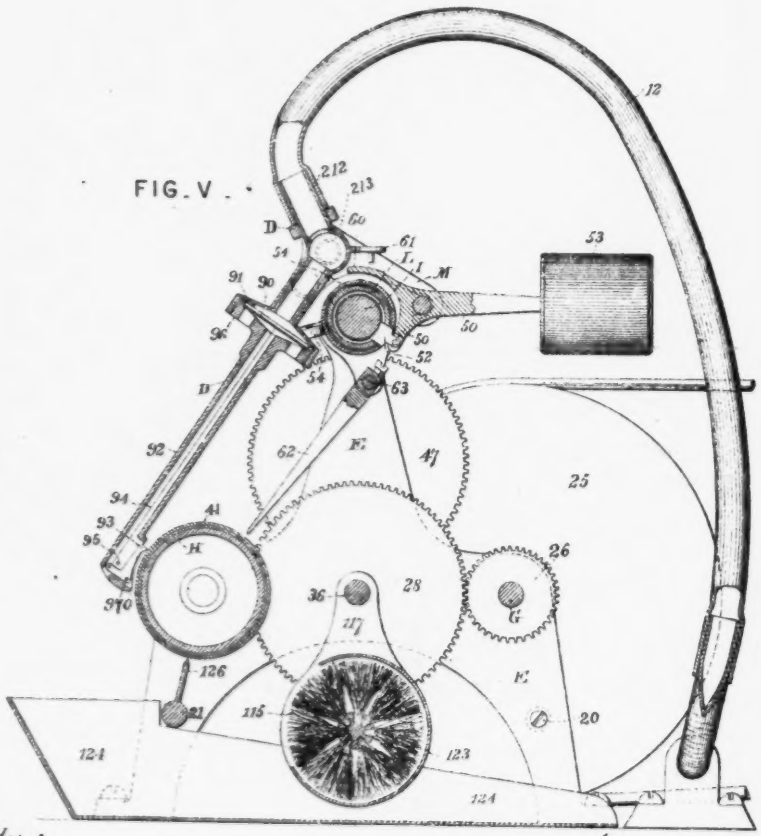
6 Sheets—Sheet 5.

C. S. TAINTER.

APPARATUS FOR RECORDING AND REPRODUCING SPEECH AND OTHER SOUNDS.

No. 375,579. Patented Dec. 27, 1887.

FIG. V.



Attest:
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425

(No Model.) 6 Sheets—Sheet 6.

C. S. TAINTER.

APPARATUS FOR RECORDING AND REPRODUCING SPEECH AND OTHER SOUNDS.

No. 375,579. Patented Dec. 27, 1887.

FIG. VII.

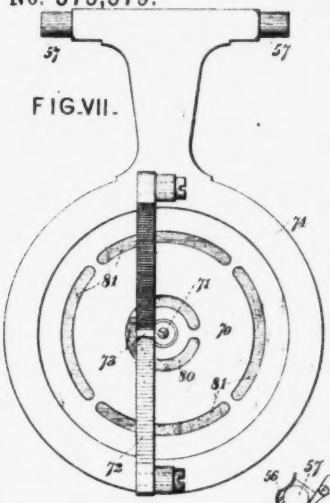


FIG. VIII.

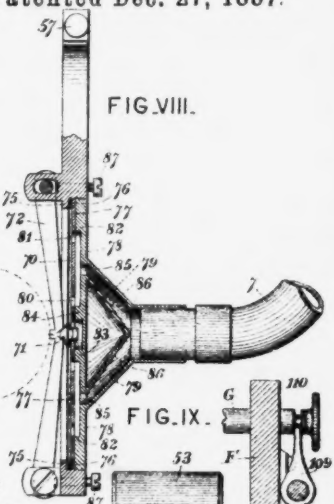
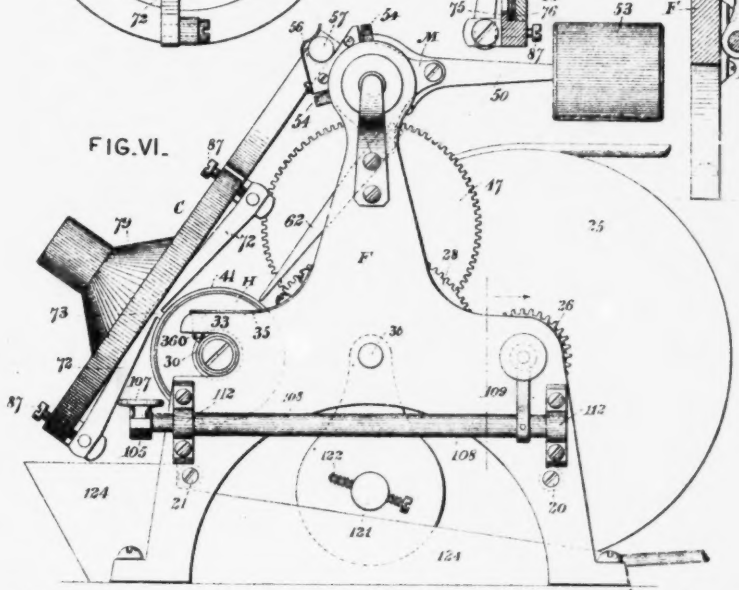


FIG. IX.

FIG. VI.



Attest:
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Philip Mauro

Inventor
Charles Sumner Tainter by
Pollok
his attorney.

UNITED STATES PATENT OFFICE.

CHARLES SUMNER TAINTER, OF WASHINGTON, DISTRICT OF COLUMBIA

APPARATUS FOR RECORDING AND REPRODUCING SPEECH AND OTHER SOUNDS.

SPECIFICATION forming part of Letters Patent No. 375,579, dated December 27, 1887.

Application filed July 7, 1887. Serial No. 243,601. (No model.)

To all whom it may concern:

Be it known that I, CHARLES SUMNER TAINTER, a resident of Washington, in the District of Columbia, have invented a new and useful Improvement in Apparatus for Recording and Reproducing Speech and other Sounds, which improvement is fully set forth in the following specification.

This invention relates more particularly to apparatus for recording and reproducing speech and other sounds, known as "graphophones," and comprises certain improvements upon the apparatus described in Letters Patent No. 341,288, granted to me May 4, 1886, and upon instruments of the same type. As described in said patent, the record or "phonogram" is cut or graved by a cutting style in a tablet, consisting of a paper tube or cylinder provided with a coating of wax or wax-like composition, the tablet being mounted on a rotating cylinder or tablet-holder and the recorder or style being advanced lengthwise of the tablet-holder by means of a feed-screw, so as to trace on the tablet a spiral line.

The present invention has for its object to simplify and improve the construction of the apparatus, to render it more complete and convenient for practical use, and to increase its efficiency in point of accuracy and distinctness in recording and reproducing speech and other sounds.

The apparatus is mounted upon a stand or table, and is adapted to be driven by foot-power, or by a small water, spring, electric, or other suitable motor. Upon the stand or table are clamped two or more flexible tubes, terminating in mouth-pieces. At the other end the tubes communicate through a socket and single tube with the recorder. This arrangement is convenient for recording a conversation between two or more persons, as in taking depositions of witnesses. A bracket or holder is provided for receiving the recorder, which can be readily detached from its carriage. Hooks are also provided for hanging the hearing-tubes when not in use. These arrangements conduce greatly to the convenience of the apparatus in practical use.

Heretofore the tablet-holder was on the main shaft. It was provided with a ball-bearing at one end and detachably held in its bearing at the other, so that it could be tilted up to remove and replace the tablet. In the present invention the tablet-holder is on an independent shaft and is driven from the main shaft by positive gearing. This simplifies the construction of the apparatus. It also enables the tablet-holder to be readily removed bodily from the machine, which is desirable both to give access to other parts and to enable a fresh tablet to be inserted with the least possible delay.

As this improvement is carried out herein, forked supports are provided in the front of the frame in which the tablet-holder can be readily inserted. The latter has loose collars, one at each end, which fit in the supports and constitute journal-boxes for the shaft. Spring-latches on the frame hold these collars in place, and one of the collars is grooved for engagement with the support, which is beveled to an edge, whereby end motion of the holder is prevented. As the spiral lines formed by the recorder are very close together, it is of the utmost importance to prevent the least endwise movement of the tablet-holder. The tablets are designed to fit the holder accurately, and heretofore they have been simply slipped on, being held in place by friction. As the tablets are apt to vary somewhat in size, it is preferred to make them a trifle larger than the holder and to make the latter at one end increasing gradually to a little larger diameter, so that the tablet can be pressed toward that end sufficiently to insure a tight fit.

In using ordinary spur-gearing to rotate the holder it is found that the motion of the latter is not absolutely uniform, but proceeds by jerks as one tooth strikes the next. Though this irregularity is very minute and not ordinarily observable, it becomes manifested in the operation of the graphophone. This difficulty is entirely overcome by connecting the driven gear of the tablet-holder with its shaft by a yielding connection. In practice a tolerably stiff spring has been used with excellent results.

Heretofore the carriage of the reproducer and recorder rested directly on the feed-screw. The latter therefore served as a way or track for the carriage. To this construction a lateral shaking or wabbling was incident, which, though actually very slight, it is desirable to avoid. The carriage is now mounted on a

smooth way or track independent of the feed-screw. Preferably the way or track is a fixed tube and the feed-screw is placed within it. The carriage carries a nut which engages and is driven by the thread of the feed-screw. The connection between the nut and carriage is a lever-arm passing through a longitudinal slot in the tubular track. The lever carries a weight which serves both to press the nut against the screw and also to counterbalance the weight of the recorder or reproducer and its accessories. The carriage in the present invention is a permanent part of the apparatus, being used with both recorder and reproducer. Preferably the carriage has small anti-friction rollers in contact with the cylinder, and these are arranged relatively to the nut to insure the greatest freedom of motion to the carriage. The lever-arm, carrying the nut and weight, and the tail-piece of the reproducer have each a finger-piece, which, when the reproducer is in place, are in such position as to be simultaneously operated to raise the nut from the screw and the style from the record, enabling the carriage to be moved back or forward, as desired. To insure accurate setting, an indicator-finger with its point close to the surface of the tablet-holder is attached to the carriage.

As heretofore made the recorder did not act as efficiently in recording sounds of high pitch as in recording sounds of lower pitch. This is believed to be due to the fact that when the sound-waves impinge directly against the center of the diaphragm the latter does not act as a unit, for if the sounds are sufficiently high two or more waves in opposite phases may, owing to the length between the center and circumference of the diaphragm, be acting upon it at the same time, and a differential effect is the result instead of the full force of the wave. This difficulty may be overcome by constructing the sound-conveying passage to the diaphragm in such manner that the atmospheric vibrations will act simultaneously upon the whole surface of the diaphragm. The best embodiment of this principle would be to construct a large air-chamber of conical form in front of the diaphragm, communicating at its apex with the mouth-piece; but this plan is not feasible, because the vibratory air-space in front of the diaphragm must be made very thin, or otherwise a disagreeable hollow quality is manifested in the reproduced sound. The object sought, however, may be practically attained without dispensing with the thin air-space, which is found to be advantageous, by dividing the sound-conveying passage as it approaches the diaphragm into a number of branches equal in length and communicating with different points on the surface of the diaphragm, whereby the latter is caused to vibrate with practical uniformity in every part, even with sounds of high pitch. This improvement obviously permits the use of a larger diaphragm than could heretofore be used with advantage, and it is applicable to other apparatus employing a diaphragm operated by sonorous vibrations.

Successful reproduction from graphophonic records which have been properly made depends largely upon the sensitiveness of the reproducing-style and its ability to follow closely the irregularities of the record, bearing always on it with uniform pressure and not skipping from one elevation to the next, as is the tendency. The elevations and depressions of the sound-record being so minute, and following in such rapid succession, make it difficult to insure that the point of the reproducing-style shall descend fully into each depression.

Heretofore the standard of the reproducer has been pivoted at one end and at the other provided with the diaphragm and style, the reproducer resting by its own weight upon the record, and being thus left free to follow its irregularities. To assist, further, its action a light spring has been arranged to bear upon the style and insure its quick return after passing an elevation in the record. It is found in practice that the weight of the diaphragm and mountings upon the free end of the reproducer-standard is too great to secure the best results, and that the device is rendered more efficient in action by reducing this weight. To this end the diaphragm is now placed nearer the other end of the standard, and therefore falls mainly on the fulcrum of the standard, instead of on the record, and it is connected with the style by a thread.

The style itself consists of a lever on one arm of which is the point that rests on the record, and to the other arm of which the thread leading from the diaphragm is attached. By this construction the pressure of the reproducer on the record is greatly reduced and the style is made to follow the record more accurately. Moreover, when the lever constituting the style rests upon the record, the diaphragm through the thread is pulled toward the style, and thereby held under tension. This tension increases as the style ascends a ridge and reacts to compel it to enter the succeeding depression. As before, the style is made flexible laterally to enable it readily to follow the grooves in the bottom of which the record is formed.

For convenience in stopping and starting the machine without interrupting the operation of the motor a clutch mechanism is combined with the main shaft. The clutch can be operated by a key-lever conveniently placed near the front of the machine. This contrivance is of great utility in transcribing from the record on a type-writer, for instance, it being, of course, difficult for the operator to transcribe as rapidly as the record is reproduced. By means of the clutch mechanism the machine can be stopped after a sufficient number of words have been reproduced until the latter have been transcribed or repeated to another person, when the machine can be instantly started again.

Heretofore the fine wax thread or shaving removed by the cutting-style has been brushed off by hand, and its entire removal has been further insured by attaching a small brush to sweep over the record in front of the reproducer. In the present apparatus a rotary brush is employed having on its shaft a pinion which can be engaged with one of the gears at the same time that the brush touches the surface of the tablet. The brush is preferably made a permanent part of the machine, being carried by a swinging frame attached to one of the shafts. When the record has been cut, the brush can be swung into contact with the tablet, and, by a slight endwise movement, a pinion carried by the brush-spindle is thrown into gear with one of the spur-wheels, and the brush is thereby rapidly rotated while the tablet revolves, completely removing the wax shavings, which fall into a tray placed under the machine. The wax thread or shaving has a tendency to wrap itself around the tablet as the latter revolves, thereby interfering somewhat with the operation of the apparatus. This is now prevented by a comb or saw-toothed plate placed lengthwise of the tablet, with its teeth in close proximity to the surface of the latter.

In addition to the improvements above indicated the invention includes certain new details of construction and combinations of parts, which will be hereinafter fully pointed out.

Having now explained the general principle of the invention, the best mode contemplated of carrying the same into effect will now be described in connection with the accompanying drawings, which form part of this specification.

Figure I is a perspective view of the apparatus arranged upon a stand or table, the recorder being shown in its operative position; Fig. II, a plan view of the graphophone proper; Fig. III, a front elevation with parts of the tray broken away to show the parts behind. Fig. IV is a sectional plan view; Fig. V, a vertical section in elevation looking to the left and showing the reproducer in place. Fig. VI is an elevation of the right end, Fig. II, of the machine, showing the recorder in place. Fig. VII is a bottom view of the recorder. Fig. VIII is a central longitudinal section thereof, and Fig. IX is a detail view of a portion of the clutch mechanism.

Referring to Fig. I, A is the stand or table upon which are placed the working parts of the apparatus. The stand A has a hinged lid, B, which in use is thrown back, forming a shelf. To the front edge of this shelf are attached by clamp-screws 2 the holder 3 for flexible tubes 4. Two tubes are shown, but a greater number could be applied in the same way. At their outer ends the tubes 4 terminate in mouth-pieces 5, and at the other ends they connect with a hollow bifurcated socket 6, connected by a tube, 7, with the recorder C. At the rear of the shelf B is a bracket, 8, in which the recorder C is placed when not in use, so that, with its attachments, it is entirely out of the way while reproducing. The arrangement is found to be of great utility in recording conversations and in taking depositions. The reproducer D is in like manner provided with two hearing-tubes, 9, terminating in ear-pieces 10, such as described in the Letters Patent aforesaid. These tubes 9 connect with opposite ends of a metal tube, 11, screwed to the stand A, from which a flexible tube, 12, leads to the reproducer D. Hooks 13 are pivoted to the back of lid B, and upon them the tubes 9 are hung when not in use. These hooks can be turned inside the lid B when the latter is to be closed.

The motor for driving the graphophone may be located beneath the stand or table A, and may be a treadle, for example. Power is transmitted from such motor by a belt, 100, to the pulley 101 of a speed-regulator, K. The latter may be of any suitable construction, and, as it forms no part of the present invention, need not be particularly described. Its object is to prevent the graphophone from being driven beyond a determined maximum speed, regardless of the speed of the motor.

Referring now to Figs. II to IX, which show the graphophone proper, the frame-work of the apparatus consists of two uprights or standards, E F, and tie-rods 20 and 21. The main shaft G is supported in bearings in the uprights E F. It is driven by the pulley 25, through which it is rotated from a suitable motor by a belt, and it carries a spur-gear, 26, which transmits motion to the other working parts. The tablet-holder H has a gear, 27, which is driven by gear 26 through an intermediary, 28, on shaft 30. The gear 28 is formed of a disk of leather or other suitable material clamped between two metal disks, the object being to prevent noise in operation. Tablet-holder H is detachably supported in a forked support in the front of uprights E F. It has at the ends loose collars 29 and 30, which, when the tablet-holder is in place, are in contact with the frame, and they constitute the bearings or journal-boxes in which the holder revolves, being held stationary in operation. Collar 29 is formed with a groove, 31, and the recess in which it rests is provided with an edge that enters this groove and prevents end motion of the tablet-holder. The pin 32 passes through a hole in the projection 33 of the upright E, and is pressed down by a leaf-spring, 34, which holds the pin against the collar 29 with sufficient pressure to keep the tablet-holder in place. A similar spring-latch, composed of the spring 35 and the pin 360, (see Fig. VI,) is arranged on the upright F to act upon the collar 30. The surface of the latter is smooth. The construction shown permits the tablet-holder to be instantly removed bodily from the machine and as quickly put back in place, thereby avoiding any considerable delay in the use of the machine when a fresh tablet has to be inserted. The tablet-holder

increases at one end to a slightly-larger diameter, as shown at 40, Figs. III and IV, so that the tablet 41, being pressed toward that end, will be held sufficiently tight to prevent slipping, even though the tablet fits quite loosely with respect to the main portion of the holder.

The gear 27 is fixed not directly to the tablet-holder H, but to a collar, 42, mounted loosely on the spindle of said holder. This collar is connected with the holder by a curved spring, 43, so that the connection between the holder and its gear is a yielding one. The curved spring 43 extends more than half-way around the collar, being fastened at one end to the latter and at the other to the tablet-holder, the collar 42 being cut away to permit this connection to be made. The object of this is to prevent minute vibrations being imparted to the tablet from the toothed gearing and to insure absolute uniformity of motion. Such vibrations are absorbed or taken up by the spring 43. The spring is covered by the sliding cap 44.

The feed-screw I is placed near the top of the apparatus and is supported in bearings in uprights E F. It carries a pinion, 45, which is driven by the main shaft through gear 26, intermediary 28, pinion 46 on the same shaft, 36, that carries the gear 28, and spur-gear 47. The feed-screw I is thus driven at a much lower speed than the tablet-holder H.

Feed-screw I, Fig. V, is inclosed in a hollow tube, L, which forms the guide way or track for the carriage M. To the latter is pivoted a lever-arm, 50, which extends to the rear of tube L. This tube has a slot therein which extends lengthwise of the sleeve to the limits of the movement of the carriage in both directions. The arm 50 carries at its end the segment of a nut, 52, having threads corresponding in pitch to those of the feed-screw I, which it engages. The nut 52 is held in engagement with the feed-screw by the pressure of weight 53, which is also carried by lever-arm 50.

The carriage M is designed to slide freely on the guide tube or way L, which it surrounds. It carries four small anti-friction wheels or rollers, 54, which are in contact with the surface of the tube L, the carriage itself not being in contact with the tube at all. The upper and lower pairs of wheels 54 are placed about one hundred degrees apart with respect to the circumference of the tube L, and they are about equidistant from nut 52, so that the bearing-points of the carriage are nearly equidistant and its pressure evenly distributed around its axis, thereby reducing friction to a minimum.

The thread of the feed-screw may be cut away at the right-hand end to stop the carriage when it reaches the end of its movement.

The carriage has in front a pair of sockets, 56, adapted to receive the trunnions 57 of the recorder C or reproducer D. The carriage M is a permanent part of the apparatus, being used with both recorder and reproducer. As the weight 53 is at the rear of the carriage, it not only acts to keep the nut 52 in engagement with the feed-screw, but also serves to counterbalance the weight of the recorder or reproducer, whichever happens to be in use.

The forward projection of the lever-arm 50 has a finger-piece, 60, Fig. II, by pressing upon which the nut 52 can be lifted out of engagement with the feed-screw and the carriage can be slid to any desired point. The reproducer D has also a finger-piece, 61, which overlaps the finger-piece 60. Thus, by pressing upon the part 61, the style of the reproducer is lifted from the record at the same time that nut 52 is disengaged from the feed-screw. This arrangement permits the carriage and parts connected with it to be moved back and forward—as, for instance, if it be desired to repeat any portion of the recorded speech or sound.

When the recorder or reproducer is in place, it is difficult to set its style accurately at any desired point. To obviate this difficulty the carriage M has a finger or pointer, 62, carried by a rod, 63. The point of the finger 62 approaches close to the surface of the tablet, and said point is in the same vertical plane transverse to the axis of the tablet as the style of the recorder or reproducer when in place in the carriage. Consequently, by means of the finger 62, the carriage can be set accurately at the desired point, and the recorder (or reproducer) then put in place.

The manner of constructing and mounting the carriage M, in addition to other advantages, prevents lateral vibration or wabbling, and one result of this is that the spiral lines of the record can be made closer together than was practicable heretofore. With the apparatus as described the relative speeds of the feed-screw and tablet-holder are so timed that the recorder traces one hundred and fifty-four lines to an inch on the tablet, thus largely increasing the capacity of the tablets.

The recorder C (see Figs. III, VI, VII, and VIII) is in most respects the same as in my Patent No. 341,288. It has the diaphragm 70, of mica, to the center of which is attached the cutting-style 71 and the adjustable bar or bridge-piece 72, having a smooth-surfaced enlargement, 73, at its middle for resting on the surface of the tablet and regulating the depth of the cut to be made by the style 71. It is attached to the carriage, as already explained, by placing the trunnions 57 in the sockets 56, from which it hangs downward and rests by gravity on the tablet 41.

The frame of the recorder consists of a metal ring, 74, with an internal shoulder or flange, 75, at its lower edge, upon which flange the mica diaphragm 70 is placed. Upon the diaphragm is a washer, 76, of yielding material—such as thick paper or card-board—and upon this is placed the metal disk 77, forming a thin air space or chamber in front of the diaphragm. These parts are held in place by the

top piece, 78, which is screwed into the ring 74. The top piece, 78, has a central cone, 79, terminating in a socket at its apex for the attachment of a speaking-tube or mouth-piece. The disk 77 has a series of openings or passages, 80 81, for the sonorous vibrations. These are shown as slots arranged in two concentric rings. These rings are disposed so as to affect equally as nearly as possible all parts of the diaphragm, the distance between the openings 80 and 81 being equal to the distance from the latter to the edge of the diaphragm and to the distance across the inner ring, 80.

The object is to divide the sound-passage, so that the sonorous vibrations will act simultaneously against different parts of the diaphragm, instead of being concentrated at its center, and thus cause it to vibrate uniformly over its entire surface. To carry out this principle it is important that all the sound-passages should be of the same length, which is secured by the construction of the top piece, 78. This is provided at its lower side with an annular shoulder, 82, which bears upon and clamps the edge of disk 77, and with a plate or disk, 83, which extends across it and forms an annular air-chamber in front of the disk 77. Disk 83 has shoulder 84 at its center, which bears upon the disk 77 between the first series of slots, 80, and the center. Disk 83 has a single series of openings or slots, 85 arranged in a ring midway between the series 80 and 81 of the disk 77. The openings 85 communicate with air-passages formed between the outer cone, 79, and an innerdeflecting-cone, 86. Thus it will be seen that the sonorous vibrations after reaching the apex of the cone 86 are propagated through a number of passages, all of the same length, but communicating with different points on the surface of the diaphragm. Upon the same principle the number of sound-passages may be multiplied by increasing the number of perforated disks interposed between the top piece and the diaphragm. The set-screws 87, passing through the frame 74, are for adjusting the position of the bridge-piece 72, and thus regulating normal depth of penetration of the style 71 into the wax coating of the tablet.

The reproducer D is best shown in Fig. V. It is hung in the carriage M in the same manner as the recorder, and the point of the rubbing-style rests by gravity upon the tablet 41, as heretofore.

The diaphragm 90 is inclosed in a case or chamber, 91, near the upper end of the reproducer-standard 92, or the end away from that which carries the style 93. The style is thus partially freed from the weight of the diaphragm and its mountings and rests more lightly on the tablet. The style 93 is an elbow or bell-crank lever pivoted at 970 in the end of the hollow standard 92, with its point projecting slightly beyond the end thereof. The style is made preferably of spring metal, so that while rigid in the direction of its normal movement it is flexible laterally, and is therefore not liable to slip out of the groove in the tablet.

The inner arm of the lever 93 is connected by a thread, 94, with the center of the diaphragm 90, the thread being inclosed in the hollow standard 92. The pin 95 acts as a stop to limit the extent to which the point of the style projects beyond its casing. The plate 96, which covers the rear of the diaphragm and to which the hollow standard 92 is attached, is perforated, so that the space behind the diaphragm is in communication with the outer air, whereby interference, which would to a certain extent result from reverberation, is prevented. All the working parts of the reproducer are thus inclosed and protected from damage that might result from careless handling. When the reproducer is in place, with the point of style 93 resting upon the record, the weight is sufficient to turn the style slightly on its pivot, pulling on the thread, and thus putting the diaphragm under tension. The tendency of the diaphragm to return to its normal position when pulled out by the motion of the style assists in causing the latter to follow closely the irregularities of the record and to descend fully into the depressions thereof.

One advantage of using a lever as the reproducing-style is that by making the inner arm shorter than the outer, as shown in the drawings, the motion of the diaphragm can be reduced, which, though it involves a slight loss in loudness, is found to produce a more than compensating gain in distinctness of enunciation.

The end of the flexible sound-conveying tube 12 fits over the upper end of a tube, 212, which is fixed in the frame of the reproducer D, and whose lower end, though not in contact, is in close proximity to the socket-piece 213, around the opening in the periphery of said piece for the passage of the sound-waves into the tube 12. The advantage of this construction is that the socket-piece may turn or vibrate on its pivots 214 without friction. It is found that there is no appreciable loss of loudness in the sounds reproduced, with a space of, say, two one-thousandths of an inch all around.

The apparatus can be started and stopped at will by means of clutch mechanism, which will now be described. (See Figs. II, III, IV, and IX.) The driving-pulley 25 is mounted not directly on the main shaft G, but on a stud, 98, fastened to upright or standard E, through which the shaft passes. The hub 97 of the pulley 25 has a serrated edge, 99, constituting one member of a clutch. The boss 103, which is fast on the main shaft G, has a corresponding serrated edge and constitutes the other member of the clutch. The main shaft G can be moved lengthwise in its bearings suffi-

ciently to engage and disengage the member of the clutch, and thereby stop or start the machine, as desired.

For greater convenience in operating the clutch a key-lever, 105, with two buttons, 106 and 107, is placed at the front of the upright F and fixed on the end of a rock-shaft, 108, having bearings in brackets 112, screwed to upright F. The rock-shaft at its rear end carries an arm, 109, whose point takes into a groove, 110, (see Fig. IX,) in the main shaft. By pressing on button 107 the main shaft is shifted to the right, the members of the clutch thrown into engagement, and the machine started. By pressing on button 106 the shaft is moved to the left, and the pulley 25 thereby disengaged from the shaft and allowed to revolve idly, the shaft coming to rest.

The cylindrical brush 115 is mounted on a spindle, 116, which has bearings in the swinging brackets 117, and carries on one end a pinion, 118, Fig. III. The brackets 117 hang loosely from shaft 36, so that, except when the brush is actually in use, it hangs clear of the other parts of the apparatus. A spiral spring, 119, encircles shaft 36 and bears at one end against a collar, 120, on said shaft, and at the other against bracket 117, and therefore tends to keep the brush in such position that the pinion 118 is out of the plane of gear 28. To use the brush, the operator swings it forward by grasping the stud 121, which is on the end of the brush-spindle 116, and at the same time pushes the brush to the left, thereby throwing the pinion 118 into engagement with gear 28, rapidly rotating the brush against the surface of the tablet, which is also in motion, and clearing it of all the cuttings of wax, which fall into the tray 124. When the brushing is complete, the operator releases it, and it falls by gravity to its normal position, the spring 119 throwing the whole frame to the right and moving pinion 118 out of the plane of rotation of gear 28. The brush 115 is inclosed for the greater part of its periphery in a casing, 123, which acts as a guard to prevent scattering of the shavings, and also partly as a frame to hold the parts together.

The screw 122, Fig. VI, passes through the stud 121. When the brush is raised, its point strikes the under side of upright F, thus limiting the motion of the brush in the direction of the tablet. The screw 122 can be adjusted to secure the proper pressure of the brush against the tablet.

The comb 126, Figs. III and V, extends across the machine below the tablet-holder, being mounted on tie-rod 27. Its teeth approach to within, say, one thirty-second ($\frac{1}{32}$) of an inch of the surface of the tablet 41. The teeth of this comb will catch the fine wax shaving cut by the recording-style and prevent its winding itself around the tablet.

A thin plate having a saw-tooth edge may be substituted for the comb with equally good effect and will be less expensive in construction.

The tablet 41 is preferably such as described in my application for Letters Patent No. 236,304, filed April 27, 1887.

It is obvious that modifications may be made without departing from the spirit of the invention, and that some of the improvements may, if desired, be used without others.

Having now fully described the said invention and the manner in which the same is or may be carried into effect, what I claim is—

1. In an apparatus for recording and reproducing sounds, the combination, with the recorder, of a flexible tube or tubes provided with mouth-pieces and communicating with the space in front of the diaphragm of said recorder, and clamps or holders for attaching said tubes to the stand or table, substantially as described.

2. The combination, in a sound recording and reproducing apparatus, of the recorder, a tube leading to the diaphragm thereof, two flexible tubes connected with said first-named tube by a two-armed socket, and clamps or holders for said tubes detachably secured to the stand or table, substantially as described.

3. The combination of the recorder, a flexible tube or tubes communicating with the space in front of the diaphragm of said recorder, clamps or holders for attaching said tubes to the stand or table, and a bracket or holder for said recorder when not in use, substantially as described.

4. The combination, in a graphophone, of the frame, the main shaft supported in bearings therein, the tablet-holder removably supported in said frame, and gearing for rotating said tablet-holder from the main shaft, substantially as described.

5. The combination of the frame provided with forked supports, the spring-latches, and the tablet-holder having collars, one at each end, for insertion in said supports, said collars constituting the journal boxes or bearings for the tablet-holder, substantially as described.

6. The combination of the frame having forked supports, the cylindrical tablet-holder, the collars thereon adapted to rest in said supports, one of said collars being grooved, and the spring-latches for holding the tablet-holder in said supports, substantially as described.

7. The cylindrical tablet-holder increasing at one end to a larger diameter than the main portion of the holder, substantially as described.

8. In a graphophone, the combination, with the main shaft, of the tablet-holder, a gear-wheel connected therewith by a yielding connection, and gearing for driving said tablet-holder from said main shaft, substantially as described.

9. The combination of the main shaft, the

tablet-holder, a gear mounted on a collar loose on said holder, a spring connecting said collar and holder, and intermediate gearing between said shaft and holder, substantially as described.

10. The combination, with the recorder and reproducer, of the carriage having sockets for supporting the same, a stationary track or way on which said carriage slides, a feed-screw, and a nut carried by said carriage and engaging said screw, substantially as described.

11. The combination of the fixed tube having a longitudinal slot, the feed-screw within said tube, the carriage sliding on said tube, the arm attached to said carriage, and the nut carried by said arm and engaging said screw, substantially as described.

12. The combination of the fixed tube, the inclosed feed-screw, the carriage sliding on said tube, and the nut engaging said screw, and the pivoted arm carrying said nut, whereby the latter may be disengaged from said screw, substantially as described.

13. The combination of the fixed tube, the inclosed feed-screw, the carriage, the anti-friction wheels on said carriage in contact with the surface of said tube, the lever-arm, and the segment of a nut carried thereby and engaging said feed-screw, said wheels and nut, which constitute the bearing-points of the carriage, being arranged at approximately equal distances apart with respect to the axis thereof, substantially as described.

14. The combination, with the fixed tube, the carriage sliding thereon, and the feed-screw, of a lever-arm pivoted to said carriage, a nut on said arm, and a weight for holding said nut in engagement with said feed-screw, substantially as described.

15. The combination of the fixed tube, the carriage sliding thereon, the feed-screw, the nut engaging therewith, the lever carrying said nut and pivoted to said carriage, and the reproducer pivoted in said carriage and having a projection overlapping the end of said lever, so that by pressing on said projection the style is lifted from the record and the nut simultaneously disengaged from the feed-screw, substantially as described.

16. The combination, with the tablet-holder, of the sliding carriage for the recorder and reproducer, said carriage being provided with an indicator-finger having its point close to the surface of the tablet-holder, substantially as described.

17. In a sound recording or transmitting device, the combination, with a diaphragm responsive to sonorous vibrations, of a disk forming an air-chamber in front of said diaphragm, said disk being provided with a number of apertures arranged in series, dividing the diaphragm into rings of equal width, and said apertures being connected with a common mouth-piece, substantially as described.

18. The combination, with the diaphragm and a sound-conveying tube of a conical deflector having its apex in the axis of said tube, a casing or top piece, and a perforated disk or disks interposed between said top piece and the diaphragm, the perforations of said disks being so disposed as to constitute sound-passages all of the same length, but leading to different points on the surface of the diaphragm, substantially as described.

19. In a graphophone, the combination, with the tablet-holder and feed-screw, of the sliding carriage provided with sockets and a recorder having trunnions for resting in said sockets, whereby it can be readily placed on and removed from said carriage, substantially as described.

20. The combination, with the diaphragm of the reproducer, of the rubbing-style consisting of a lever having the rubbing-point formed on one arm and the other connected with said diaphragm, substantially as described.

21. In a reproducer adapted to rest by gravity on the record, the combination, with the standard, of a style supported in the free end thereof, a diaphragm mounted near the other end thereof, and a connection between the style and diaphragm, substantially as described.

22. The combination of the standard, the style consisting of a lever pivoted at one end thereof, the diaphragm supported near the other end, and a thread connecting one arm of said lever with the diaphragm, substantially as described.

23. The combination of the hollow standard, the diaphragm mounted therein, the style pivoted in the end thereof, and the thread inclosed in said hollow standard and connecting the style and diaphragm, substantially as described.

24. The combination, with the diaphragm, of the pivoted style, said style being connected with the diaphragm at a point nearer its fulcrum than the point that rests on the record, substantially as described.

25. In a graphophone, the combination, with the main shaft, the feed-screw and tablet-holder, and gearing for driving the same from said main shaft, of a clutch for starting and stopping said shaft at will, substantially as described.

26. In a graphophone, the combination, with the main shaft, the feed-screw and tablet-holder, and gearing for driving the same from said shaft, of a wheel or pulley for driving said shaft, mounted loosely thereon, and a clutch for engaging said shaft with said pulley or wheel when desired, substantially as described.

27. In a graphophone, the combination, with the main shaft, driving-pulley, tablet-holder, and carriage for the recorder or reproducer, operated from said main shaft, of the clutch mechanism for connecting and disconnecting said shaft and pulley and the key-lever carried by a rock-shaft connected at one end with said main shaft for operating said clutch mechanism, substantially as described.

28. The combination, with the tablet and tablet-holder and driving mechanism for the latter, of a rotating brush having a pinion on its spindle adapted to engage one of the gears of the machine when the brush is brought against the surface of the tablet, substantially as described.

29. The combination, with the tablet, tablet-holder, and driving mechanism, of the cylindrical brush having bearings in a swinging frame, so as to hang normally free of said tablet, but adapted to be brought into contact therewith and simultaneously thrown into gear with said driving mechanism, substantially as described.

30. The combination, with the tablet, tablet-holder, and driving mechanism, of the brush having bearings in a swinging frame hanging clear of the tablet, a pinion for engaging one of the gears, and a spring for moving the frame laterally to hold said pinion normally out of the plane of rotation of said gear, substantially as described.

31. The combination of the tablet-holder, the wax-coated tablet, the cylindrical brush carried in a swinging frame, and the tray beneath the brush and tablet, substantially as described.

32. The combination, with the tablet and tablet-holder, of the toothed plate or comb lengthwise of said tablet and having the points of its teeth in close proximity to the surface thereof, substantially as described.

33. The combination, with the pivoted reproducer having a suitable socket-piece provided with a sound-opening on its periphery, of a sound-conveying tube having its end in close proximity to the said socket-piece around the said opening, leaving a small space, so as to avoid friction, substantially as described.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

CHARLES SUMNER TAINTER.

Witnesses:
ROBINSON WHITE,
O. J. HEDRICK.

UNITED STATES PATENT OFFICE.

EMILE BERLINER, OF WASHINGTON, DISTRICT OF COLUMBIA.

PROCESS OF PRODUCING RECORDS OF SOUND.

SPECIFICATION forming part of Letters Patent No. 382,790, dated May 15, 1888.

Application filed March 17, 1888. Serial No. 267,865. (No model.)

To all whom it may concern:

Be it known that I, EMILE BERLINER, a citizen of the United States, residing at Washington, in the District of Columbia, have invented certain new and useful Improvements in Producing Records of Sounds, of which the following is a specification.

In a patent granted to me November 8, 1887, No. 372,786, I have described a method of recording and reproducing spoken words and other sounds; and in connection therewith and as a part thereof I have described a process of producing a record of sound-waves in solid resisting material by photo-engraving, the phonautographic record of such sound-waves having first been produced as an undulatory line of even depth in a traveling layer of non-resisting material.

My present invention is an improvement upon that described in my aforesaid patent; and it has for its object the production of a record of sound-waves in solid resisting material, principally metal, by the process of direct etching, whereby a solid unchangeable sound-record is obtained more cheaply and more readily, either upon a flat or upon a curved surface, without the delicate and intricate manipulations incidental to the process of photo-engraving. All this will more fully appear from the following detailed description, in which I shall freely refer to what is shown and described in my aforesaid patent as a part of the now common knowledge of mankind.

In accordance with the rules laid down in my patent, I produced a phonautographic record upon a traveling layer of lamp-black or other non-resisting material. Then this phonautographic record was transferred by photo-engraving upon metal, and the metallic record thus obtained was used for reproducing the recorded sounds.

In the course of my experiments I have found that in place of lamp-black other substances may be used as the non resisting medium for receiving the original phonautographic record, and I have also found that among these substances are such as will resist the chemical action of acids, but which offer no perceptible mechanical resistance to the movement of the recording-stylus. Upon this discovery my present invention is based, and it consists, broadly speaking, in producing a phonautographic record through a film of a suitable etching-ground deposited upon a traveling surface of resisting material, such as metal or glass, and then subjecting said surface to the action of a suitable etching agent, which attacks said surface at the places only where the etching-ground has been removed by the recording-stylus.

The etching-ground, which is to serve as the non-resisting medium for the phonautographic record, I prepare by dissolving beeswax, paraffine, or other like substance in a suitable solvent. By preference I use beeswax, and dissolve the same in benzine, so as to obtain a saturated solution. This solution is filtered, and care is taken to exclude as much as possible all dust, which is always present in the ambient air. The surface which is intended to receive this ground, which may be a flat disk or a cylinder of metal or glass, should be smoothly polished, and must be cleansed and dried. The wax solution is then poured over this surface, so as to cover the same at all points, and the solvent is then allowed to evaporate, which it does in one or two minutes. An exceedingly-fine film of wax then remains adhering to the surface of the metal or glass, and the consistency of this wax is such that it offers no perceptible mechanical resistance to the action of the recording-stylus, while at the same time it resists the chemical action of ordinary etching agents. In this respect the film of wax deposited from the solution is quite different from a layer of wax produced by melting. The latter has such consistency and adheres to the supporting-surface with such tenacity that considerable force must be used to penetrate the same and remove it from its support, while the wax film deposited in the manner described is so delicate that a camel's-hair brush will disturb it perceptibly.

Partly on account of the too great sensitiveness of a single film, and also as an additional protection against the action of the acids employed in the subsequent etching, I ordinarily, but not necessarily, apply a second coating of the solution, which, when dry, leaves a film of wax of such thickness as I have found to answer all requirements. A plate or cylinder thus prepared may be preserved in-

definitely, and is at all times in good condition to receive the phonautographic record. Such record is produced by moving the prepared surface under a stylus actuated by sound-waves to remove an undulatory line of the non-resisting film from its support, whereby the latter is laid bare along the said line, as is fully described in my patent above referred to, and as is now well understood by those skilled in the art. The plate or cylinder is then subjected to the action of a suitable etching agent, the nature of which varies according to the material of the support. For metals—such as zinc, copper, or brass—diluted nitric, hydrochloric, or other acid is used, while for glass or other like materials fluoric acid, or the fumes of the same, must be used. In either case I obtain upon the support within a few minutes an undulatory groove of even depth representing the sound-waves which acted upon the recording-stylus, and this groove is of sufficient depth to guide and control a reproducing-stylus in the manner set forth in my Patent No. 372,786.

I do not confine myself to any particular mode of etching, the ordinary process being followed in this respect. The same is true of the practice of rebiting, if a single exposure to the etching agent should prove to be insufficient to produce a groove of sufficient depth. From a record produced in the manner described any number of copies may be obtained by electro-deposition, especially if the original record is etched in metal. In that case, however, I have found it advisable to burnish the original record groove before the plate or cylinder is placed into the depositing-bath. This is a very simple process, and consists in holding and gently pressing a pointed burnishing-tool in the record-groove while the plate or cylinder is rotated. The tool is held in one hand while the plate or cylinder is rotated by the other. In this manner the burnishing-tool is guided through the record-groove from one end to the other, and the slightly-granular structure of the etched groove is thus polished without losing any of its essential characteristics. This process occupies only a very few minutes, and while it improves the galvano-plastic copy obtained from the original record, it is not absolutely essential. In place of a special burnishing-tool the reproducing-stylus may be used, the point of which is ordinarily of hard metal—such as iridium—so that the burnishing is effected by simply using the record once or twice for reproducing the recorded sounds in the ordinary manner.

It has been stated above that the dissolved and filtered wax or other ground should be carefully protected again t dust, which is always present in the surrounding air, and it is obvious that the same precaution should also be taken with respect to the plate or cylinder upon which the record is made; but experience has shown that it is almost impossible to guard effectually against the accession of fine filamentary particles of dust to and into the body of the tracing or etching ground. These dust particles are so fine that they cannot, as a rule, be detected by the most searching inspection of the prepared plate; but they become very conspicuous and a very serious source of annoyance when the record is made. As the recording-stylus passes through the wax or other ground, a fine undulatory line of the latter is removed, and the removed material drops away from the stylus as soon as removed, so that the point of the stylus always remains clean. This, however, is only the case when the ground is free of filamentary impurities; but if filaments of dust are embedded in the ground they adhere to the stylus, and, together with a coating of the ground, are dragged through newly-formed grooves, whereby the latter become uneven and receive ragged edges, which seriously impair the accuracy of the record. I have discovered an effective means for overcoming this difficulty, and it consists in simply moistening the record-surface with a fluid that slightly adheres to the ground and keeping it moist while the record is being made. I have found strong alcohol to be very effective for this purpose when wax is used as a tracing-ground, and it is used by pouring it over the ground just before the plate or cylinder is started to move under the recording-stylus. The alcohol evaporates rapidly, but not so rapidly as to disappear entirely before the record is finished, and this record now shows no trace of inequality, the lines being as sharp and well defined as if cut by a graver. The point of the stylus remains quite clean, and it seems as if the filamentary particles had disappeared. I have no definite theory by which to explain this surprising result. It is possible that the exceedingly-fine dust particles are forced against the walls of the grooves and are there held when the ground is in the peculiar state of dampness which it receives when alcohol is poured over the same. It is also possible that these particles of dust, being probably of organic matter, are dissolved by the alcohol, and it is also possible that both causes operate to keep the point of the stylus clean, so as to make a sharp and well-defined record; but whatever be the mode of action of the alcohol poured over the ground its effect is highly beneficial and its use constitutes one of my improvements.

The film of ground which I employ is so exceedingly thin that it is practically colorless and transparent. The record is for this reason almost invisible to the naked eye. In some cases, however, it is desirable to be able to inspect and scrutinize the record before it is exposed to the action of the etching agent, or to watch the progress of the record, and for this reason it is advisable to slightly color the ground before the record is made. I accomplish this by adding a small quantity of aniline-dye or other coloring-matter to the solu-

tion of wax or other ground. The record is then plainly visible as a pale line upon a dark ground.

Having now fully described my invention, I claim and desire to secure by Letters Patent—

1. The method or process of producing a record of sound-waves in solid resisting material for reproduction of the recorded sounds, which consists in covering the surface of such material with a film of etching-ground that offers no perceptible mechanical resistance, then making a phonautographic record upon and through the etching-ground, and then exposing the record to the action of a suitable etching agent, substantially as described.

2. The method or process of producing a record of sound-waves in solid resisting material for reproduction of the recorded sounds, which consists in depositing upon the surface of such material a film of wax from a solution of the same in a suitable menstruum, then making a phonautographic record upon and through the wax film, and then exposing the record to the action of a suitable etching agent, substantially as described.

3. The method or process of producing a record of sound-waves in solid resisting material for reproduction of the recorded sounds, which consists in depositing upon the surface of such material a film of wax from a solution of the same in benzine, then making a phonautographic record upon and through the wax film, and then exposing the record to the action of a suitable etching agent, substantially as described.

4. The method or process of preparing solid surfaces for the reception of a phonautographic record, which consists in depositing upon said surfaces a film of tracing or etching ground and then moistening such film with an adhering fluid, substantially as described.

5. The method or process of preparing solid surfaces for the reception of a phonautographic record, which consists in depositing upon said surfaces a film of wax and then moistening the wax film with alcohol, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

EMILE BERLINER.

Witnesses:
JOSEPH LYONS,
S. WOLF.

437
(No Model.)

4 Sheets—Sheet 1

C. S. TAINTER.

GRAPHOPHONE.

No. 385,886. Patented July 10, 1888.

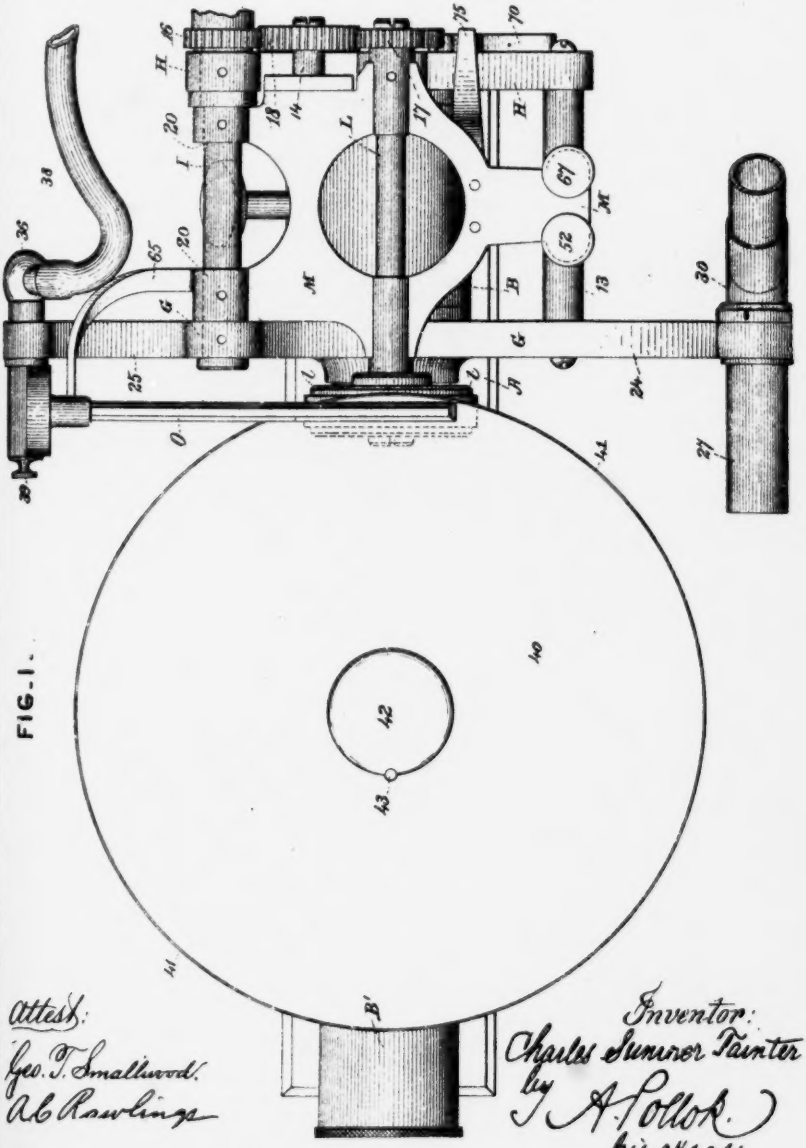


FIG. 1.

Attest:
Geo. T. Smallwood.
A. C. Rawlings

Inventor:
Charles Sumner Tainter
by A. Pollok.
his attorney.

428
(No Model.)

4 Sheets—Sheet 2.

C. S. TAINTER.

GRAPHOPHONE.

No. 385,886. Patented July 10, 1888.

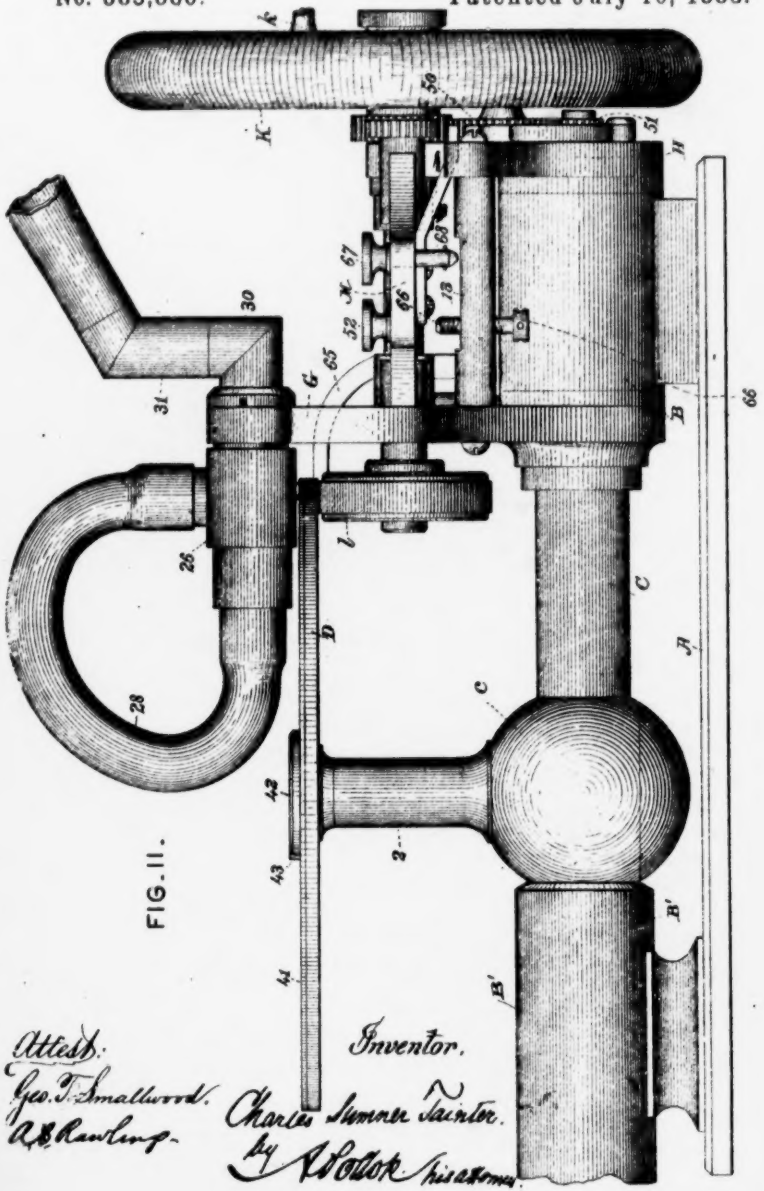


FIG. II.

Attest:
Geo. T. Smallwood.
A. B. Rawlings.

Inventor.
Charles Sumner Tainter.
by A. Pollok his attorney.

(No Model.) 4 Sheets—Sheet 3.

C. S. TAINTER.

GRAPHOPHONE.

No. 385,886. Patented July 10, 1888.

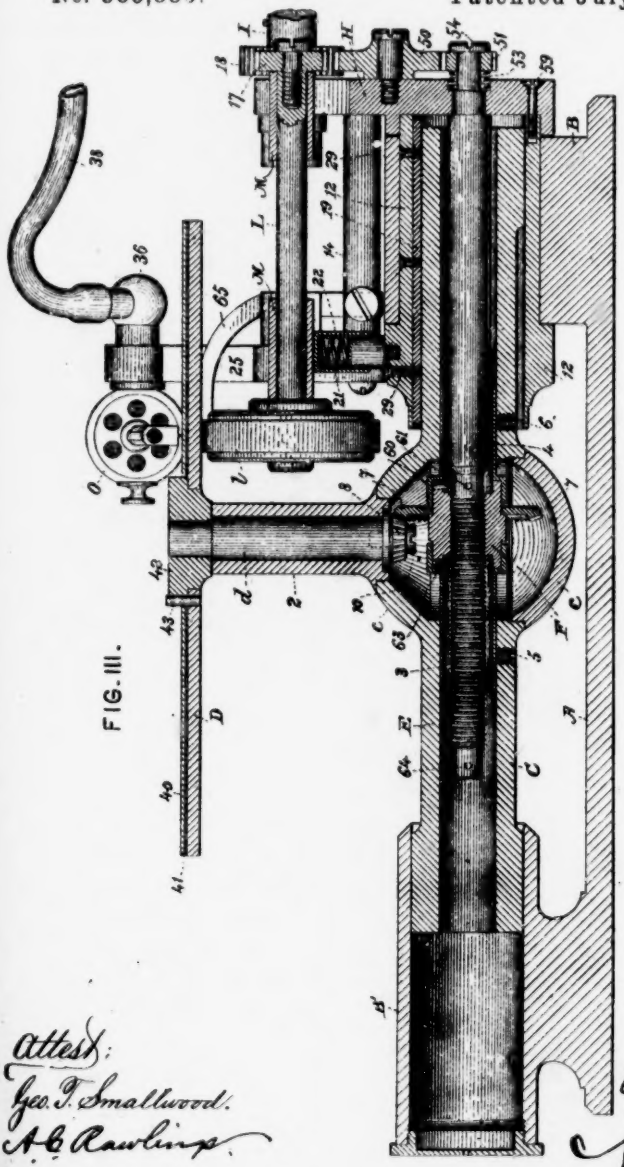


FIG. III.

Attest:
Geo. T. Smallwood.
A. C. Rawlings.

Inventor:
Charles S. Tainter
by
A. Bell K.
his attorney.

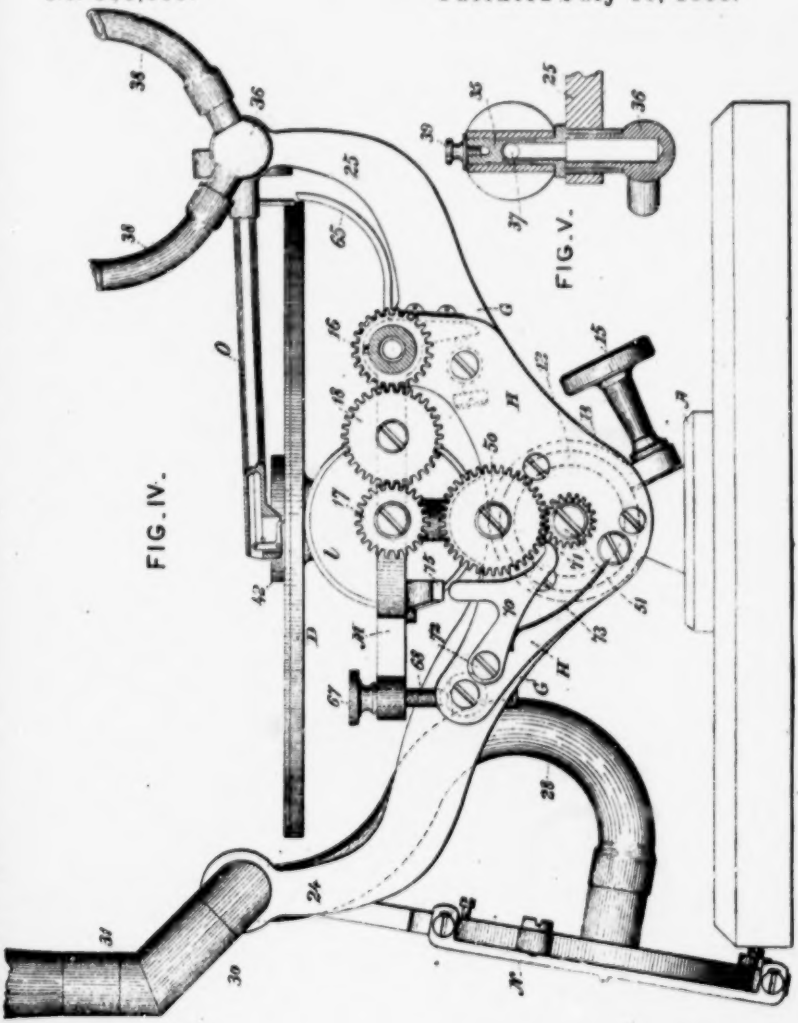
440
(No Model.)

4 Sheets—Sheet 4.

C. S. TAINTER.

GRAPHOPHONE.

No. 385,886. Patented July 10, 1888.



Attest:
Geo. T. Smallwood.
A. D. Rawlings.

Inventor:
Charles Sumner Tainter
by A. Pollok.
his attorney.

UNITED STATES PATENT OFFICE.

CHARLES SUMNER TAINTER OF WASHINGTON, DISTRICT OF COLUMBIA.

GRAPHOPHONE.

SPECIFICATION forming part of Letters Patent No. 383,836, dated July 10, 1888.

Application filed December 24, 1887. Serial No. 259,461. (No model.)

To all whom it may concern:

Be it known that I, CHARLES SUMNER TAINTER, of Washington, in the District of Columbia, have invented a new and useful Improvement in Graphophones, which improvement is fully set forth in the following specification.

This invention relates to apparatus for recording and reproducing speech, known as "graphophones," and has more particular reference to that class or type of graphophones in which the sound-record is made on a flat tablet. Such an apparatus is described in Letters Patent No. 341,214, granted May 4, 1886, to Chichester A. Bell and myself.

The invention has for its object, generally, to improve the construction of machines of this type and render them better available for practical use than they are in the forms known at present.

The tablet is preferably a thin layer of wax or a wax-like composition on a base of sheet metal or other suitable material. It rests on a disk-shaped tablet holder supported on a vertical shaft, said tablet-holder being driven by a friction-wheel making contact with its under surface. The tablet-holder and its shaft are so supported and connected with the driving mechanism that they are advanced slowly as the tablet rotates. The recorder therefore traces a spiral line upon the tablet. On a tablet of wax the lines of the spiral can be made very close together—say one one hundred and fiftieth ($\frac{1}{150}$) part of an inch or less apart. The longitudinal movement of the tablet and its holder is effected by means of a feed screw and nut, as will be hereinafter fully described. The recorder and reproducer are pivoted, respectively, on opposite sides of the tablet, so that when not in use either instrument can simply be turned on its pivot out of the way. This arrangement adds to the convenience in use of the machine, as it obviates the necessity of removing the recorder and substituting the reproducer, or vice versa.

When in operation, the point of the recording-style rests just above the friction-wheel that rotates the tablet, and the position of the reproducer on the opposite side of the tablet is such that when lowered into position its style will rest upon the same point on the surface of the tablet. As the longitudinal travel of the tablet-holder is very slow, it would require considerable time to set it back to the starting-point if the mere reversal of the main shaft were relied on for that operation. Consequently means have been provided whereby a rapid return of the tablet can be effected. To this end the arbor of the friction driving-wheel is supported in bearings on a frame swiveled on the main shaft and upheld by spring-pressure. By depressing this frame the friction-wheel is removed from contact with the tablet-holder, and at the same time the main shaft is thrown into gear with the feed screw (which in operation is stationary, the nut traveling with the tablet-holder) and imparts to said screw a rapid rotation, whereby the feed-nut, and with it the tablet-holder, is quickly moved back to the starting-point. Means are also provided whereby, when the starting-point is reached, the screw is automatically arrested, though the main shaft may continue to rotate; and by similar means the nut is arrested at the farther limit of its travel, which is of course determined by the diameter of the tablet designed to be used. A partial depression of the swiveled frame disconnects the friction-wheel and tablet-holder, arresting the latter without setting the reversing mechanism into operation. An arm carried by said swiveled frame lifts the reproducer from the tablet (should that instrument be in its operative position) when said frame is completely depressed.

The frame supporting all the operative parts of the apparatus is swiveled in bearings of the base or bed plate, so that it can be tilted to a greater or less angle with the horizontal, when its use may be thereby facilitated, and for the same purpose of adding to the convenience of the user the mouth-piece is connected with the recorder through a universal joint, so that said mouth-piece can be turned in any direction.

The invention comprises the new improvements above indicated as well as certain special features of construction and combinations and arrangement of parts, as hereinafter fully described.

In the accompanying drawings, which form a part of this specification, Figure I is a plan view of a machine constructed in accordance with the invention; Fig. II, a front elevation thereof; Fig. III, a vertical longitudinal section; Fig. IV, a side elevation with the fly-wheel removed, and Fig. V a partial vertical section through the support of the reproducer.

A is the base or bed plate, and B B' are tubular ways thereof in which the ends of the slide C are supported. Said slide has a bulb, *c*, intermediate between its ends, in the top of which is screwed the hollow standard 2, in which turns the shaft *d* of the tablet-holder D. The latter is in the form of a flat disk. Inside the tubular slide C is the feed-screw E, which in the operation of recording and reproducing is stationary. The feed-nut F, which engages said screw, is inclosed in the bulb *c*. It turns in bearings formed by the sleeves 3 4, which are connected to the slide C by screws 5 6. Feed-nut F carries a beveled gear, 7, which engages a beveled gear, 8, on the lower end of shaft *d*, the gear 8 being connected with said shaft by a screw, 10, tapped into the end thereof. When the tablet-holder rotates, it turns the nut F through gears 7 and 8, and the screw E being stationary the nut moves slowly lengthwise thereof, carrying with it the slide C and all the parts carried thereby.

G and H are standards or uprights. They are connected by a sleeve, 12, passing through tube B and adapted to turn therein. The sleeve 12 is in one piece with standard G, and is connected with standard H by screws 59 and tie-rods 13 and 14. Tube B is disconnected from the base A at the rear side, and is provided with a clamp screw, 15, whereby it can be tightened around the sleeve 12, and thus hold the frame and all the operative parts rigidly in one position. By loosening said screw the machine can be tilted forward and backward and clamped in the position that may be most convenient for the user. To prevent the slide C from tipping in its bearings, the end of said slide which enters the bearing B is grooved, and a spline, 19, which is attached to sleeve 12 by screws 29, enters said groove and prevents the slide C from turning independently of said sleeve 12.

The main shaft I has bearings in the uprights G H, and it carries a fly-wheel, K, and a crank-handle, *k*, for turning. Shaft L has bearings in a frame, M, and it is rotated from the main shaft through spur-gears 16 and 17 and intermediary 18, the latter being mounted on a stud tapped into said frame. At the left end of shaft L is a friction-wheel, *l*, which bears on the under side of tablet-holder D and turns the same on its shaft *d*.

The frame M is swiveled on the main shaft at 20 (see Fig. I) and can be lowered, so as to throw the friction-gear *l* out of contact with the tablet-holder D, and thus arrest the motion of the latter. The frame is normally held up by the pressure of spring 21, which bears at its lower end against upright G. The spring is surrounded by a tube, 22, which presses against frame M.

Upright G has arms 24 and 25 projecting toward the front and rear, respectively, and these constitute the supports for the recorder N and reproducer O.

The frame of recorder N has at its end a sleeve, 26, which slips on the tubular support 27, which is carried by the arm 24. Sleeve 26 is connected by a flexible tube, 28, with the sound-chamber of the recorder. On the right side of arm 24 is a bent tube, 30, which can turn in said arm, and another angular tube, 31, is connected with and can turn on the tube 30. The tubes 30 and 31 constitute a universal joint or socket for the mouth-piece of the recorder, which is adapted to be connected with the end of tube 31. The mouth-piece can thus be turned in any direction to suit the position of the user. It will be seen that a continuous sound-passage from mouth-piece to the diaphragm of the recorder is formed by the tubes 30, 31, and 27, sleeve 26, and flexible tube 28.

Heretofore flexible tubes have been employed to convey sound-waves to a diaphragm; but these require to be held to the lips by hand. In the use of a graphophone it is often desirable that the hands should be free for other purposes. By the construction described a rigid connection between the diaphragm and mouth-piece is provided, while at the same time the latter can be turned in any desired direction without disturbing the position of the style.

The recorder can be turned bodily on sleeve 27 as a center to bring its style into contact with the tablet, as shown in Fig. II, or to turn it out of the way, as in Fig. IV. When in its operative position, the point of the style rests on the tablet just above the friction-wheel *l*.

The reproducer O is mounted similarly to the recorder on a tubular support, 35, carried by arm 25, and is held in place by a screw, 39. A bifurcated socket-piece, 36, conveys the sonorous vibrations to suitable hearing-tubes, 38. Tubular support 35 has a perforation, 37, (see Fig. V,) through which it communicates with the hollow standard of the reproducer when the latter is in its operative position. When not in use and turned out of the way, this communication is cut off. The point of the reproducing-style, when in use, likewise rests just above the friction-wheel *l*. The relative positions of the recorder and reproducer are such that if the former be raised and the latter lowered into position its style will touch the same point on the tablet where that of the recorder rested.

The recording-tablet consists of a thin layer, 40, of wax or a wax-like composition upon a base or support, 41. (Shown as a disk.) It is preferred to make the base 41 of sheet metal, as other materials are more or less likely to warp. The edge of the disk 41 is turned up

all around, and the wax melted and poured into the dish thus formed. The center of the tablet is cut out to fit over the hub 42 of the tablet-holder D, and the latter has a projection, 43, which takes into a notch in the edge of the disk 41 and prevents the latter from slipping. While it is preferred to use a tablet of this description and to form the record by cutting or engraving therein, as described in the patent aforesaid, it is obvious that the machine is also adapted to operate in connection with a recorder that produces a record by indenting in a pliable substance or by removing part of a thin film of lamp-black, or in any other practical way.

The construction of the recorder and reproducer is or may be such as described in previous patents, and therefore needs no particular description here.

When the slide C has reached the farther limit of its motion, as shown in Fig. II, it can be quickly set back to the starting-point by reversing mechanism which will now be described. An intermediary, 50, turns on a stud carried by upright H and gears with a pinion, 51, on the end of feed-screw E. By depressing frame M, by pressing on button 52, the gear 17 is thrown into engagement with gear 50, and at the same time friction-wheel *l* is removed from tablet-holder D. Now, by turning the main shaft in the same direction as before the feed-screw E is driven at a high speed, and as the nut F is stationary, owing to the disconnection of wheel *l* and tablet-holder D, the said nut is rapidly moved to the right, carrying with it the slide C and all the parts supported thereby. Pinion 51 is connected with the feed-screw only by friction produced by a spring-washer, 53, pressing it against screw 54. This is sufficient to insure rotation of the feed-screw; but when the nut F reaches the limit of its return movement a pin, 60, carried thereby strikes a pin, 61, on said screw and stops the rotation of the latter, the pinion 50 now turning against the pressure of washer 53 independently of the screw. When the nut F reaches the limit of its travel to the left, a pin, 63, strikes a pin, 64, on the feed-screw E, and the latter then turns with the former. The slide C is thus automatically arrested at both limits of its travel.

Frame M has a backwardly and upwardly extending arm, 65, the end of which approaches close to the under side of the reproducer. If the latter be in its operative position when the frame M is depressed to operate the reversing mechanism, it will be lifted by arm 65 clear of the record. Frame M is, as shown, provided with two buttons, 52 and 67, for pressing with the finger. If it be desired simply to stop the tablet without setting the reversing mechanism into operation, button 67 is used. By pressing on button 52 the frame is completely depressed. Button 67 is on the end of a shank, 68, which passes loosely through a hole in the frame M, and its motion is limited by contact with the tie-rod 13. By pressing button 52, however, the frame continues to descend after the end of shank 68 strikes the tie-rod, because said shank is not connected rigidly with the frame, but passes loosely through the same, as already stated. A stop-screw, 66, passes through tie-rod 13 and limits the movement of frame M when pressed down by button 52.

As has been stated, in the operation of recording and reproducing the feed-screw is stationary; but unless positively held it would be liable to be turned in its bearings by the friction of the feed-nut F. To prevent this a locking-lever, 70, is pivoted at 72 to the upright H, (see Fig. IV,) and has a point, 71, which engages the teeth of wheel 50 and holds it stationary. The locking device 70 is held in this position by a spring, 73. Since pinion 51 on the feed-screw E is engaged by wheel 50, the feed-screw is thus prevented from rotating. When, however, frame M is depressed to operate the reversing mechanism, as arm, 75, carried by said frame strikes the pivoted locking device 70 and releases the gear 50, so that when the latter is engaged by gear 17 it is free to rotate.

In operation, the slide being at the right-hand limit of its motion, as in Fig. III, the recorder is lowered until it rests upon the wax surface of the tablet. The main shaft being rotated, tablet-holder D is driven by friction-wheel *l*, and in turn rotates the feed-nut F, which is thus caused to advance slowly lengthwise of feed-screw E, which is held stationary by the engagement of locking-lever 70 with gear 50. The point of the recorder therefore traces a volute or spiral line on the surface of the tablet. As the tablet-holder D continues to advance, the point of contact with it of the friction-wheel *l* gradually approaches its outer edge. Consequently the tablet-holder revolves more and more slowly; but the surface-speed under the point of the recorder (or reproducer) is uniform. This construction and its advantages are fully set forth in the patent hereinbefore referred to.

It is obvious that modifications may be made in details of construction, and that parts of the invention may be used without the whole without in either case departing from the spirit of the invention.

The flat tablet herein shown and described forms the subject-matter of my application No. 269,465, filed April 3, 1888, and is not claimed herein.

Having now fully described my said invention and the manner in which the same is or may be carried into effect, what I claim is—

1. In a graphophone, the combination, with the tablet-holder and means for rotating and advancing the same longitudinally, of the recorder and reproducer, each pivoted on suitable supports and adapted to be turned into and out of operative position, substantially as described.

2. The combination of the slide, the tablet-holder mounted on a shaft having bearings in said slide, means for rotating said shaft and advancing said slide, a recorder pivoted on one side of the tablet-holder, and a reproducer pivoted on the opposite side thereof, their relative positions being such that the recording and reproducing styles touch the tablet at the same point, substantially as described.

3. In a graphophone, the combination, with the rotatory tablet-holder, the friction-wheel for driving the same, and means for advancing said tablet-holder longitudinally, of a recorder pivoted to the frame and a reproducer also pivoted to the frame, said recorder and reproducer being so disposed that when either is in operative position its style will rest on the tablet just above said friction-wheel, substantially as described.

4. In a graphophone, the combination, with the rotatory tablet-holder, of the friction-wheel for driving the same and a tilting frame in which the arbor of said friction-wheel is journaled, substantially as and for the purpose described.

5. In a graphophone, the combination, with the tablet-holder and means for rotating the same, of the feed-nut, the feed screw, and means for disconnecting said nut from the driving-shaft and simultaneously connecting said screw therewith, substantially as described.

6. In a graphophone, the combination of the slide, the rotatory tablet-holder carried thereby, the feed-screw normally stationary, the feed-nut connected to be advanced lengthwise of said screw by the rotation of said holder, and means for disconnecting said tablet-holder from the driving-shaft and connecting the feed-screw therewith so as to reverse the movement of said nut, substantially as described.

7. The combination of the slide, the tablet-holder, the friction-wheel for rotating the same, the tilting frame in which the arbor of said friction-wheel is journaled, gearing for driving the latter from the main shaft, the feed-screw normally stationary, the feed-nut carried by said slide and connected by gearing with said tablet-holder, and gearing for connecting said feed-screw with said main shaft when said frame is moved to disengage the tablet-holder and friction-wheel, substantially as described.

8. In a graphophone, the combination of the slide, the tablet-holder carried thereby, the feed-nut and feed-screw, the driving mechanism, and stop-pins on said feed nut and screw, whereby the slide is automatically arrested at the limits of its travel, substantially as described.

9. The combination of the slide, the rotatory tablet-holder, the reproducer, the feed nut and screw, mechanism for reversing the movement of said slide, the tilting frame for operating said reversing mechanism, and an arm carried by said slide and adapted to lift the reproducer from the tablet when said frame is tilted, substantially as described.

10. The combination of the slide, the tablet-holder, the feed-screw, the feed-nut connected by gearing with said tablet-holder, a pinion loosely mounted on said feed-screw, a spring-washer for effecting a frictional connection between said screw and pinion, and stop-pins on said nut and screw by engagement of which the screw and nut are connected together, substantially as described.

11. The combination of the slide, the tablet-holder, the feed-screw supported in bearings in the frame, the feed nut connected by gearing with said tablet-holder, and the locking device for holding said feed-screw stationary, substantially as described.

12. The combination of the slide, the tablet-holder, the feed screw supported in bearings, the feed-nut rotated from said tablet-holder, the locking device for holding said screw stationary, the tilting frame for disengaging said tablet-holder from the main shaft and connecting the feed screw therewith, and an arm or projection adapted on the depression of said frame to disengage said locking device, substantially as described.

13. The combination of the rotatory tablet-holder, the feed screw and nut for moving said tablet-holder longitudinally, a tilting frame, a friction-wheel on an arbor having bearings in said frame for rotating said tablet-holder, and reversing-gears adapted to be connected with the main shaft by said frame, all constructed and arranged as set forth, so that the frame can be tilted to disconnect said friction-wheel and tablet-holder without connecting said reversing-gear and main shaft, substantially as described.

14. The combination of the tablet-holder, the feed-nut connected by gearing with said tablet-holder, the feed-screw normally stationary, the tilting frame, the friction-gear for rotating said tablet-holder, carried on an arbor having bearings in said frame, reversing-gears adapted to connect said screw and the main shaft when said frame is tilted, a button on said frame for tilting the same, and a second button on a shank passing loosely through said frame and having its end in close proximity to a fixed part of the apparatus, so that on pressing the latter button the frame will move only far enough to disengage the tablet-holder and friction-gear without connecting in the reversing mechanism, substantially as described.

15. The combination, with the frame and recorder, of the rigid sound-conveying tube having several bent or angular sections jointed together, constituting in effect a universal joint, whereby the position of a mouth-piece attached to said tube can be shifted vertically or laterally without disturbing the position of the style, substantially as described.

16. In a graphophone, the combination

with a supporting-frame, and the tablet-holder, recorder, and operative mechanism carried by said frame, of the base or bed plate to which said frame is pivotally connected, so that the entire apparatus can be tipped to any angle, and means, as specified, for holding the apparatus at the angle to which it may be adjusted, substantially as described.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

CHARLES SUMNER TAINTER.

Witnesses:
PHILIP MAURO,
C. E. HADLEY.

446
(No Model.)

2 Sheets—Sheet 1.

W. SUESS

GRAMOPHONE.

No. 427,279. Patented May 6, 1890.

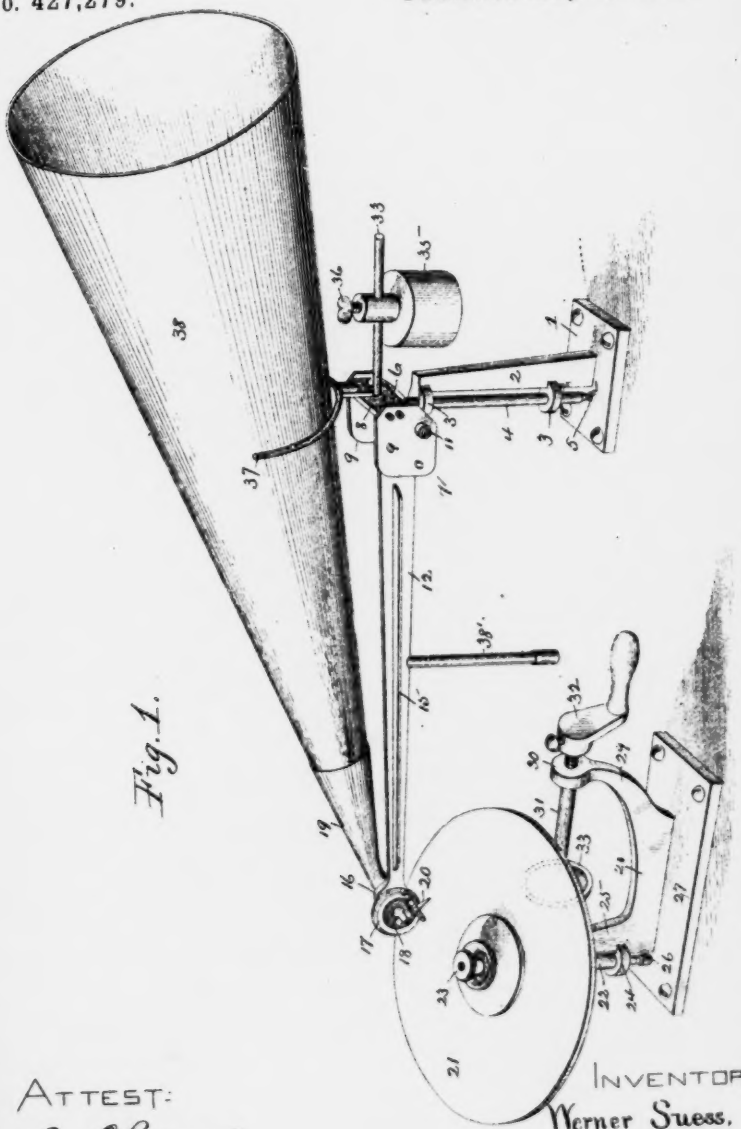


Fig. 1.

ATTEST:

Roy C. Bowen

F. T. Chapman

INVENTOR:

Werner Suess,

By Joseph Lyon,

his Attorney.

447

(No Model.) 2 Sheets—Sheet 2.

W. SUESS.

GRAMOPHONE.

No. 427,279 Patented May 6, 1890.

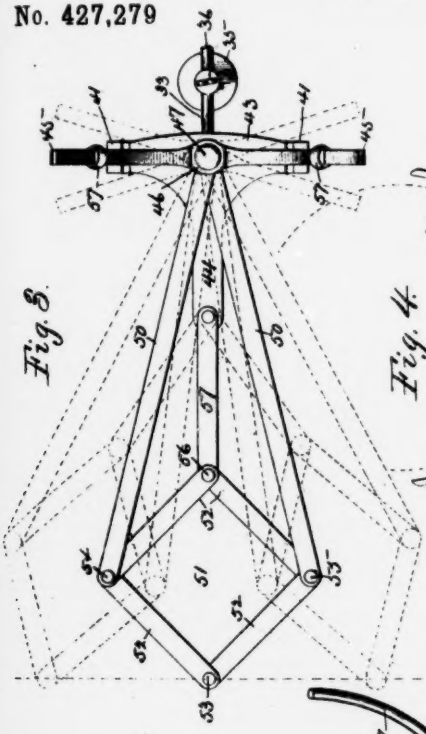


Fig. 3.

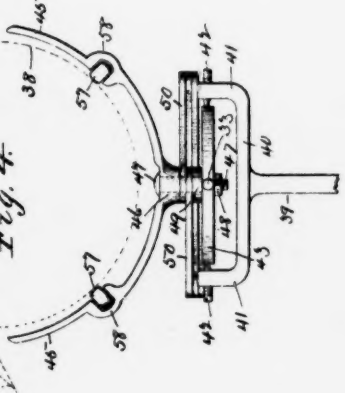


Fig. 4.

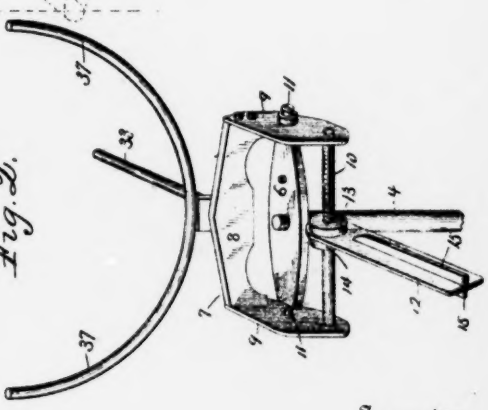


Fig. 2.

Witnesses

Percy C. Brown

F. F. Chapman

Inventor.

Werner Suess.

By his Attorney

Joseph Lyons

UNITED STATES PATENT OFFICE.

WERNER SUESS, OF WASHINGTON, DISTRICT OF COLUMBIA, ASSIGNOR TO EMILE BERLINER, OF SAME PLACE.

GRAMOPHONE.

SPECIFICATION forming part of Letters Patent No. 427,979, dated May 6, 1890.

Application filed August 6, 1888. Serial No. 319,866. (No model.)

To all whom it may concern:

Be it known that I, WERNER SUESS, a citizen of the United States, and a resident of Washington, in the District of Columbia, have invented certain new and useful Improvements in Gramophones, of which the following is a specification.

My invention has reference to improvements in the reproducing apparatus adapted for use in the method of recording and reproducing sounds set forth in Letters Patents No. 372,786, of November 8, 1887, and No. 382,790, of May 15, 1888, both granted to Emile Berliner. The whole apparatus used for the practice of the said method has been called the "gramophone," and in this class of sound recording and reproducing apparatus the record is ordinarily produced on the face of a rotating disk as a volute band consisting of a sinuous or undulating groove of even depth. In the production of this record a recording-stylus is made to travel over the face of the rotating disk from the outer circumference toward the center in a straight radial path. The reproduction of the recorded sounds is effected by giving to a reproducing-stylus vibratory movement by and in accordance with the sinuosities of the record-groove, and, these vibratory movements being transmitted to a diaphragm, vibrations of the latter give rise to sounds which are copies of the sounds originally uttered against the recording apparatus.

With the view of intensifying the sound emitted by the reproducer, and more especially of directing the same to the listener or listeners, I r a funnel-shaped tube, on the contracted end of which the reproducing stylus and diaphragm are mounted, while the open flaring end of the tube is directed toward the listener or listeners. This flaring sound-conveyer, thus becoming an integral part of the reproducer, must have all the mass movements of the stylus and diaphragm, and being of considerable weight it must be so supported and balanced that the recording-stylus will bear with light but sufficient pressure upon the record-tablet. The best results are obtained if the reproducing-stylus is made to travel in a straight radial line across the face of the record-tablet, substantially in the manner in which the recording-stylus has traveled in producing the record. The main features of my present invention therefore have reference to the means for supporting and counterbalancing the sound-conveying tube with its attached diaphragm and reproducing-stylus and for making the path of the stylus across the face of the record-disk as nearly as practicable a straight radial line. The stylus engaging with its point the record-groove is controlled by the walls of the latter, and, as will be hereinafter more fully shown, I rely upon this control of the stylus by the walls of the record-groove for the movement of the stylus across the face of the disk, there being no positive feeding mechanism for thus moving the stylus. All this will more fully appear from the following detailed description, in which reference is made to the accompanying drawings, which form a part of this specification, and in which I have shown, in—

Figure 1, a perspective view of one form of reproducer, shown in the supporting frame with a sound-conveying tube, with the diaphragm and stylus in operative relation to the record-disk. Fig. 2 is a perspective view of the pivotal bearing of the frame with parts removed and broken away. Fig. 3 is a plan view of another form of supporting-frame for the reproducer, by which the stylus is caused to travel in a straight line across the record-tablet. Fig. 4 is an end view of the same with the counter-weight removed.

Like numerals of reference indicate like parts all throughout the drawings.

Referring now to Fig. 1, there is shown a base-plate 1, which may be secured by screws or otherwise to any suitable support—such, for instance, as a table. Erected on this base-plate is a standard 2, on one edge of which are laterally-projecting eyes 3, forming guides in which turns a vertical shaft or pivot 4. This shaft is stepped at the lower end in a bearing 5 in the base-plate, and at the upper end has secured to or formed on it a head 6, which, as shown more clearly in Fig. 2, consists of a flat plate, to the center of which the shaft 4 is attached. This head 6 serves

as a support for a frame 7, consisting of an end piece 8, two parallel side pieces 9, secured at one end to the end piece by screws, as shown, or otherwise, and a rod 10, joining the other ends of the side pieces 9. Mounted in the side pieces 9 are pointed screws 11, projecting through nuts therein and entering oppositely-arranged seats (not shown) in the ends of the head 6, and forming a pivotal bearing for the frame 7, around which it may turn in a vertical plane at right angles to the axis of the shaft 4. It will now be understood that the frame 7 may be moved in any direction, the shaft 4 and pivot-screws 11 constituting a universal joint for the same. The rod 10 carries one end of an arm 12, secured rigidly thereon by a jam-nut 13, which clamps the said arm firmly against a flange 14 on the rod, which latter is screw-threaded, as shown, for the reception of the nut 13. The arm 12 is stiffened by longitudinal side ribs 15 and terminates at the free end in a head 16, on one side of which is secured a diaphragm-holder 17, carrying a diaphragm 18, and on the other side of the head there is secured a flaring socket 19, communicating at its reduced end with a chamber (not shown) at the rear of the diaphragm.

Attached to the diaphragm is a stylus 20, mounted for lateral vibration, and, together with the said diaphragm, forming a sound-reproducer. The construction of the stylus and the mounting therefor form no part of the present invention, and are therefore not specifically described herein. The point of the stylus rests normally in the record-groove produced on the face of a disk-tablet 21, which is mounted for rotation upon a disk carried by a vertical shaft 22, similar to the shaft 4, before described. As shown in Fig. 1, the shaft 22 has at its upper end a thumb-nut 23, by means of which the tablet is clamped thereon, and the said shaft is passed through eyes 24 (one only being shown) on a standard 25 and stepped in a bearing 26 in a base-plate 27, on which the standard is erected. The lower end of the standard is extended laterally on the plate 27, as shown at 28, and terminates in an upturned end 29, carrying at its upper end and below the level of the tablet a bearing 30 for a horizontal shaft 31, which latter is provided with a crank 32 at the outer end and a friction-wheel 33 at the inner end, which wheel engages the under side of the tablet-supporting disk, which is not visible in the drawings. It will now be understood that when the shaft 31 is rotated by means of the crank 32 the friction-wheel 33, engaging the tablet-support, will cause the latter to rotate and carry successive portions of the record under the stylus to reproduce the sounds in a manner described in the aforesaid Letters Patent.

The mechanism for supporting and rotating the tablet may be of any suitable construction and entirely different from that shown, such construction being by no means an essential feature of my invention.

Secured to the end piece 8 of the frame 7 is a rod or arm 33', extending in a direction opposite to that of the arm 12, and carries a weight or block 35. This weight may be adjusted upon rod 33' and clamped in any desired position on a thumb-screw 36.

Attached to a short stem erected on the end piece 8 and over the shaft 4 is a semicircular bracket 37, on which rests the funnel-shaped sound-conveyer 38, the smaller end of which enters the socket 19. It will be readily understood that the sound-conveyer supported in the manner described, together with the diaphragm and stylus carried in the mounting attached to the arm 12, may be moved laterally around the axis of the pivot-shaft 4 and vertically around the axis of the frame 7. By reason of these two movements the stylus may be made to approach toward or recede from the axis of the rotating tablet, and in this manner traverse every portion of the surface of the said tablet, or it may be swung aside and entirely removed therefrom.

The operation of an apparatus so constructed is as follows: The tablet 21, containing a sound-record in the form of a convolute, sinuous, or wavy groove produced in the manner set forth in my aforesaid Letters Patents, is mounted on the supporting-disk carried by the shaft or spindle 22. The weight 35 is adjusted to nearly counterbalance the arm 12 and parts carried thereby, so that the stylus rests lightly, but with sufficient pressure, on the tablet with its point in the record-groove. The tablet is now rotated and the sinuous groove thereon vibrates the stylus, which in turn vibrates the diaphragm in accordance therewith, and thus produces sound-waves, which latter are directed toward the listener by the sound-conveyer 38. As the rotation of the tablet is continued the convolutions of the record-groove will cause the stylus to be slowly drawn across the tablet, turning the entire support of the reproducing apparatus on its pivot-bearing, the said stylus moving along a slightly-curved path over the said tablet. When placing a tablet in position, or on removing it therefrom, it is necessary to move the reproducer out of operative relation thereto, and for this purpose the supporting-frame is swung on the horizontal and vertical pivots to some position away from the tablet, when it may be lowered until a leg 38', which depends from the arm 12, rests upon the table on which the apparatus is secured. It will be understood that the counter-weight may be adjusted to cause the stylus to bear with any desired degree of pressure on the tablet.

Referring now more particularly to Figs. 3 and 4, there is shown a standard or post 39, which is fixed to a table or other support and terminates at the upper end in a yoke 40, having two upturned parallel ends 41, each carrying an inwardly-projecting pointed screw 42, extending through a suitable nut formed therein. The pointed ends of these screws enter suitable seats on opposite sides of a

plate 43 and constitute a horizontal pivotal bearing on which the said plate may be rocked. The plate 43 has an arm 44 formed on it and extending centrally from one side at right angles to its axis, and it also has another arm 33', similar to that shown in Figs. 1 and 2, extending in a direction opposite to the arm 44, being on the other side of the axis of the plate. The arm 33' carries a sliding weight 35, similar in construction to that before described, and in a like manner serving as a counter-weight. Above the center of the plate 43 there is a semicircular bracket consisting of two curved branching arms 45, rising from a block 46. Through this block there is a perforation for a pivot-bolt 47, which extends downwardly through the plate 43 and there receives a nut 48, by means of which the bolt is secured to the said plate, and the head of the bolt engages the upper face of the said block 46. This bolt 47 also passes through a washer 49, resting directly on the upper surface of the plate 43, and through eyes formed in the ends of links 50, the said ends being interposed between the lower end of the block 46 and the washer 49. Thus it will be seen that the bolt forms a vertical pivot around which the bracket 45 46 and the links 50 may move, and also secures them to the said plate. The outer ends of the links 50 are pivoted to opposing corners of an articulated frame 51, composed of links 52, of equal length, connected together at the ends by pivot-pins 53, 54, 55, and 56, respectively, the pins 54 and 55 also connecting the links 50 to the frame at the points before mentioned. The pin 56 also pivotally connects one end of a link 57 to the corresponding corner of the frame 51, the other end of the said link being pivoted to the outer end of the arm 44.

The frame 51, together with the links 50 and 57, constitutes a well-known mechanical movement by which a curvilinear movement is converted into a rectilinear movement, provided the various links have the proper relative lengths, which is supposed to be the case in this instance, and therefore no detailed description of the operation thereof is deemed necessary.

In the apparatus shown in Figs. 3 and 4 the arm 12 is replaced by the link movement or system, and in this case the stylus and diaphragm will be mounted on the outer or free end of the said link system—namely, at 53—and the sound-conveyer 38 (indicated by dotted lines in Fig. 4) will rest on friction-rollers 57, mounted in bearings formed in cut-away or recessed portions 58 of the bracket-arms 45. In the operation of this apparatus the counter-weight 35 is adjusted in the manner before described and the entire reproducer mechanism is moved to a position in which the stylus rests on the tablet at the beginning of the record to be produced. Such position is indicated in Fig. 3 by the upper series of dotted lines, from which it will be seen that the frame 51 is of greater length than breadth. As the record-tablet is rotated the volute record-groove acting on the stylus slowly draws it across the face of the tablet, as before explained, and turns the entire reproducing apparatus on its vertical axis or pivot 47. As the apparatus approaches the position coinciding with the vertical plane of the arm 44 of the plate 43 the link 57, moving through an arc of shorter radius than that of the links 50, tends to force the frame 51 outward, which tendency is resisted by the said links 50, and the consequent action of these two opposing forces is to shorten the length and increase the breadth of the said frame 51 until it assumes the square form shown in full lines, Fig. 3. As the movement of the stylus is continued beyond the central plane of the arm 44 the frame 51 will be again lengthened, as indicated by the lower series of dotted lines. It will be understood that the length of the frame 51 decreases as the latter approaches a central position and increases as it recedes therefrom, and in accordance with this change of shape of the said frame its outer end (and the stylus thereon) will be carried to a constantly-increasing distance from the pivot or axis of the apparatus, and the resultant of this constant longitudinal movement of the outer end of the frame while the apparatus moves in an arc around its pivot is to move the said end in a straight line. When the reproducer-stylus is moved over the record-tablet in the manner stated, its path will coincide with the radius of such tablet, and the point of the said reproducer-stylus will be at all times in the same relation to the record-grooves as was the recorder-stylus in producing such record. In this operation the sound-conveyer must participate in the movement of the stylus toward and from the pivot 47, and it will therefore slide upon the arms 45 of the supporting-bracket, and with a view of reducing the friction the rollers 57 are provided.

Having now fully described my invention, I claim and desire to secure by Letters Patent—

1. In an apparatus for reproducing sounds from a record-tablet, the combination, with a reproducer mechanism consisting of a sound-conveying tube and a diaphragm and stylus mounted at one end of the tube, of a freely-swinging supporting-frame for the said reproducer mechanism and a weight adjustable on the said frame to counterbalance the reproducer mechanism, substantially as described.

2. In an apparatus for reproducing sounds from a record-tablet, the combination, with a reproducer mechanism consisting of a sound-conveyer and a diaphragm and stylus mounted at one end thereof, of a supporting-frame for the said reproducer, loosely pivoted to swing freely both laterally and vertically, and

an adjustable counter-weight on the said frame for determining the pressure of the stylus on the record-tablet, substantially as described.

3. In an apparatus for reproducing sounds from a record-tablet, the combination, with a reproducer mechanism consisting of a sound-conveyer and a diaphragm and stylus at one end of the said conveyer, of a counterweighted pivoted frame for supporting the reproducer mechanism and provided with a system of laterally-movable pivoted links connected at one end to the said reproducer mechanism and at the other to a portion of the supporting-frame fixed against lateral movement, substantially as described.

4. In an apparatus for reproducing sounds from a record-tablet, the combination, with a reproducer mechanism consisting of a sound-conveyer and a diaphragm and stylus at one end of the said conveyer, of a system of links supporting the stylus end of the reproducer and proportioned and arranged, as described, for moving the stylus in a straight path across the record-surface, substantially as described.

5. In an apparatus for reproducing sounds from a record-tablet, the combination, with a reproducer mechanism consisting of a sound-conveyer and a diaphragm and stylus at one end of the said conveyer, of a system of links supporting the stylus end of the reproducer and constructed, as described, for moving the stylus in a straight path across the record-surface, and a pivoted bracket on which the sound-conveyer rests, provided with anti-friction rollers on which the said conveyer travels longitudinally to participate in the movement of the stylus end of the reproducer, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WERNER SUESS.

Witnesses:
F. T. CHAPMAN,
J. B. MACAULEY.

452
(No Model.)

4 Sheets—Sheet 1.

E. BERLINER.

GRAMOPHONE.

No. 534,543. Patented Feb. 19, 1895.

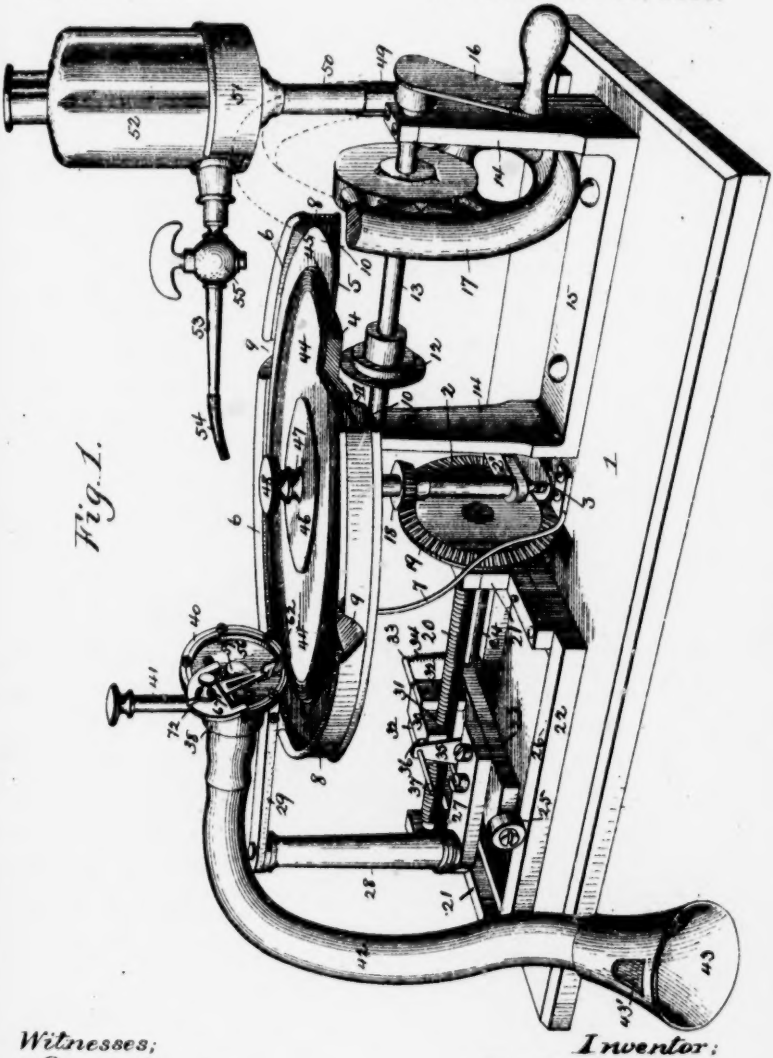


Fig. 1.

Witnesses;
Roy C. Bowen
F. T. Chapman

Inventor;
Emile Berliner,
By Joseph Lyon.
Attorney.

453
(No Model.)

4 Sheets—Sheet 2.

E. BERLINER.

GRAMOPHONE.

No. 534,543. Patented Feb. 19, 1895.

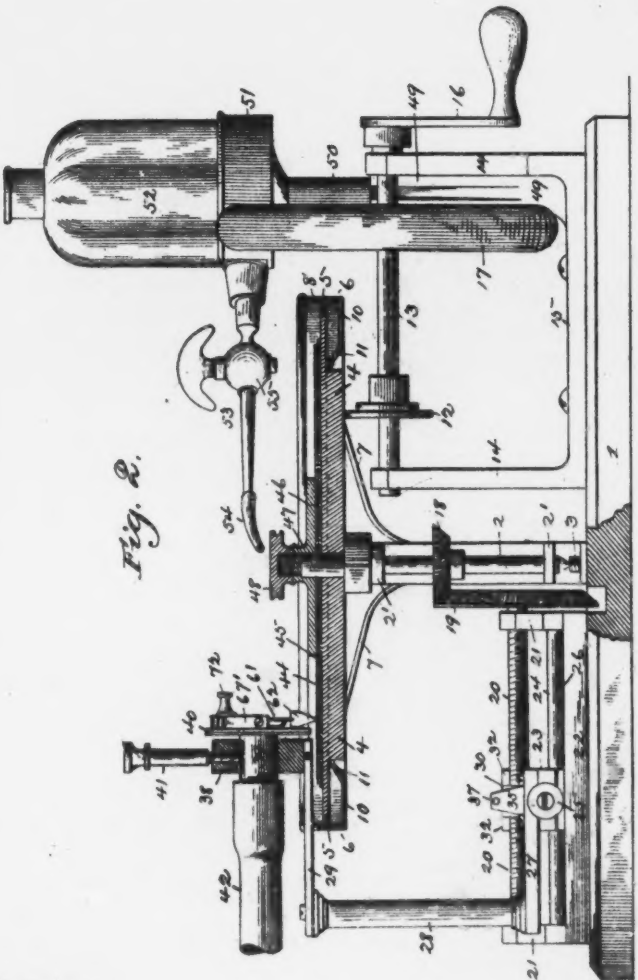


Fig. 2.

Witnesses:
J. B. McGirr.
F. F. Chapman

Inventor,
Emile Berliner,
By Joseph Lyons.
Attorney

454
(No Model.)

4 Sheets—Sheet 3.

E. BERLINER.

GRAMOPHONE.

No. 534,543. Patented Feb. 19, 1895.

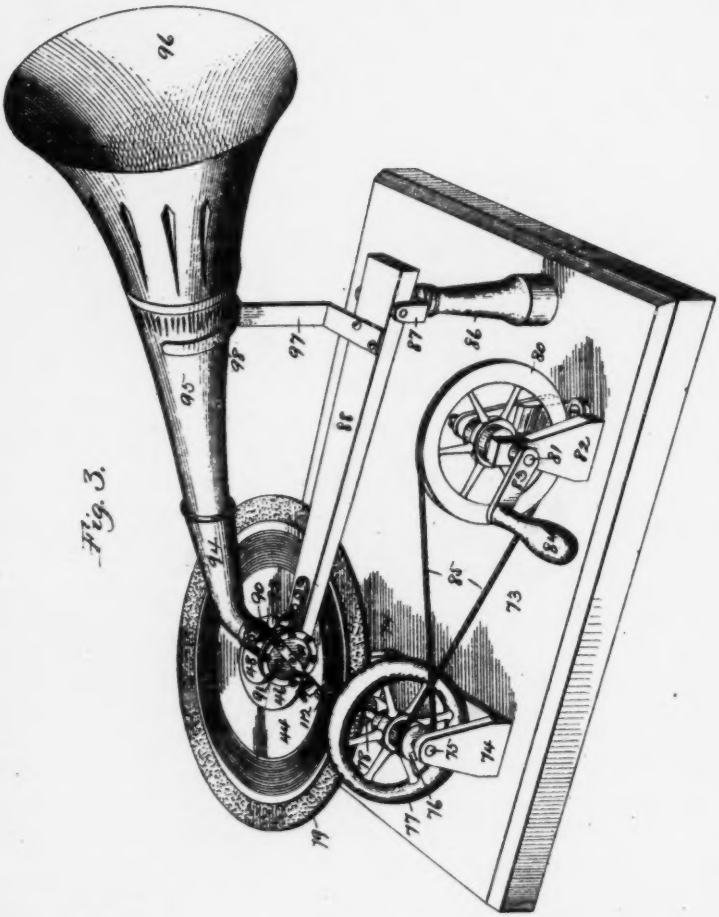


Fig. 3.

Witnesses:

Percy C. Brown

H. T. Chapman

Inventor:

Emile Berliner,

By Joseph Lyons.

Attorney.

455

(No Model.) 4 Sheets—Sheet 4.

E. BERLINER.

GRAMOPHONE.

No. 534,543. Patented Feb. 19, 1895.

Fig. 4.

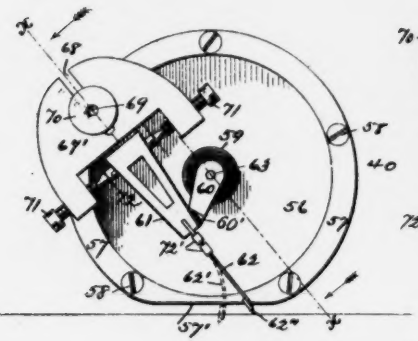


Fig. 5.

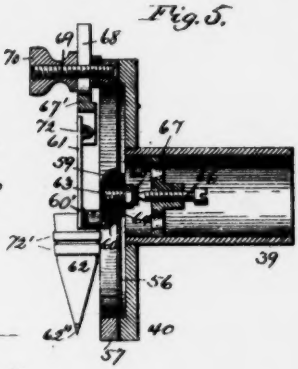


Fig. 6.

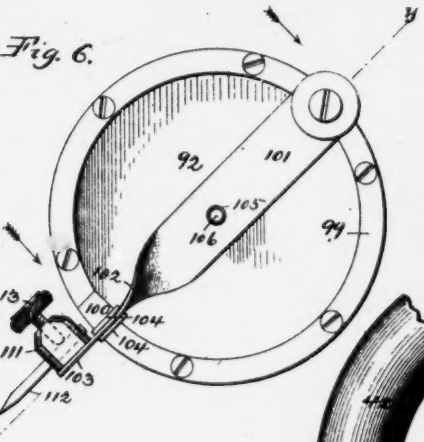


Fig. 7.

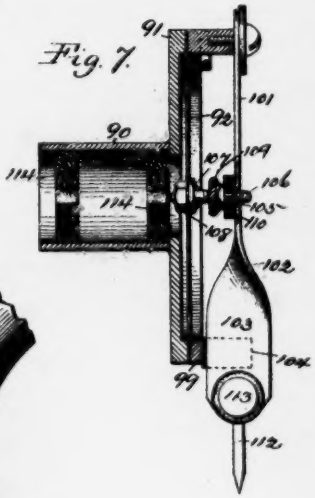
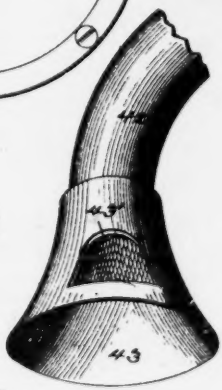


Fig. 8.



Witnesses:

Percy C. Bowen

G. J. Chapman

Inventor:

Emile Berliner,

By Joseph Lyon.

Attorney.

UNITED STATES PATENT OFFICE.

EMILE BERLINER, OF WASHINGTON, DISTRICT OF COLUMBIA, ASSIGNOR TO THE UNITED STATES GRAMOPHONE COMPANY, OF SAME PLACE.

GRAMOPHONE.

SPECIFICATION forming part of Letters Patent No. 534,543, dated February 19, 1895.

Application filed March 30, 1892. Serial No. 427,060. (No model.)

To all whom it may concern:

Be it known that I, EMILE BERLINER, a citizen of the United States, and a resident of Washington, District of Columbia, have invented certain new and useful Improvements in Gramophones, of which the following is a specification.

My invention has reference to improvements in the method of and apparatus for recording and reproducing sounds, the improvements being more particularly directed to the construction of that kind of sound recording and reproducing apparatus which I have called "gramophone," and for which Letters Patent of the United States No. 382,790, dated May 15, 1888, have been granted to me.

One feature of my invention has reference to improvements in the method of recording sound by tracing upon a fatty film deposited upon a metallic surface, undulatory lines, corresponding to sound waves, and then etching such lines in the metal base, or as it is now commonly called, the record tablet; while the other features of my invention have reference to the construction of the details of both the recorder and the reproducer of the gramophone. Each of these features of improvement are designed to overcome certain difficulties, and to avoid certain imperfections heretofore met with in the operation of the gramophone. These difficulties and imperfections, and the manner in which they are avoided, will be particularly pointed out in the following detailed description with reference to the accompanying drawings, in which—

Figure 1, is a perspective view of my improved gramophone recorder. Fig. 2 is a side elevation, partly in section, of the recorder. Fig. 3 is a perspective view of a gramophone reproducer. Fig. 4, is an elevation of a recording diaphragm and stylus. Fig. 5, is a section of the same on the line x—x of Fig. 4. Fig. 6, is an elevation of the gramophone reproducing diaphragm and stylus. Fig. 7, is a section of the same on line y—y of Fig. 6, and Fig. 8, is a perspective view of an improved mouth-piece for the recorder.

Like numerals of reference indicate like parts throughout the drawings.

My improved gramophone recorder is shown as a whole in Figs. 1 and 2, mounted upon a suitable base 1. About midway of the length of this base there is an upright shaft 2, journaled in brackets 2', 2', stepped at its lower end in a suitable bearing 3. This shaft carries at its upper end a circular disk 4, the outer or peripheral portion of which is reduced in thickness as shown at 5, and this reduced portion extends over a ring shaped pan 6, supported by stays or brackets 7, from which it may be lifted and removed, when required. The outer edge or wall 8, of the pan is of sufficient height to project for a distance above the disk 4, and is provided with a curling lips 9, for a purpose hereinafter described. The bottom 10 of the pan extends under the reduced portion 5, of the disk 4, and its inner edge 11, is upturned close to the under side of the reduced portion of the disk, as shown.

Bearing against the under side of the disk 4, is a friction wheel 12, secured to a horizontal shaft 13, which latter is journaled in the upper ends of posts or uprights 14 constituting the ends of a frame, the base 15, of which is secured to the base 1 of the apparatus. The position of shaft 13, and the diameter of the friction wheel 12, are such, that a portion of the weight of the disk 4, and of its shaft 2, is supported by the friction wheel; whereby the bearing 3, is relieved from a portion of that weight, and whereby frictional gearing between the disk 4 and wheel 12 is insured, without requiring special adjustment. The shaft 13, carries at its outer end a crank 16, by means of which it is rotated; and between the two uprights 14, there is secured to the shaft a heavy fly or balance wheel 17. Secured to the upright shaft 2, below the disk 4, there is a beveled pinion 18, meshing with a large bevel gear 19, on one end of a horizontal screw-threaded shaft 20, which is arranged radial to the disk 4, and journaled adjacent to the said gear 19, and also at the other end, in pillow-blocks 24, supported on the end piece of a rectangular frame 22, which in turn is fast on the base 1. Mounted upon the frame 22, so as to be movable thereon in the direction of the length of the shaft 20, there is a carriage 23, supported at one end by a guide rod 24, on which it is free to slide, and at the other end by a roller 25, movable

along the upper surface 26, of one of the side pieces of the frame 22. The carriage 23, has firmly secured to it a projecting arm 27, on the outer end of which is an upright post 28, carrying at its upper end an arm 29, parallel with the arm 27, and of such length as to overhang the disk 4, when the carriage is moved to the right, as represented in the drawings; the construction being such, that when the carriage 23 is moved in the manner to be described, the arm 29, will be carried radially over the disk 4, and any object carried thereby will participate in said movement.

The carriage 23, is moved in one direction by means of the screw-threaded shaft 20, and in order to effect this operation, there is provided a block 30, in one side of which, near one end, is formed a half nut 31, constructed to engage the threads on the shaft 20; and this block 30, is pivotally supported between ears 32, erected on the carriage 23. Projecting from the other end of the block 30, there is a pin 33, to which one end of a spring 34, is attached, the other end of said spring being secured to the carriage 23, and the tendency of the spring is to maintain the block 30, in a tilted position with the nut portion raised out of engagement with the shaft 20. In order to lock the block 30, in engagement with the shaft 20 there is provided a leaf spring 35, mounted on the carriage 20, opposite the free end of the block 30, and having on its free end a tooth 36, which passes over the top of the hinged block 30, when the nut formed in the same is in engagement with the screw threads on the shaft 20, the tendency of the leaf spring 35, being to move inwardly toward the block 30. This catch spring 35, is also provided with a pin 37, which serves as a handle for withdrawing the catch so as to unlock the block 30, and thereby allow the carriage 23 with its appurtenances to be freely moved to any position upon the frame 22.

To the free overhanging arm 20, is secured a ring sleeve 38 which receives the neck 39, projecting on one side from the frame 40, in which latter the recording diaphragm and styles are mounted, and this neck 39, with its appurtenances is fixed in any desired position in the ring frame 38, by a clamp screw 41. The free end of the neck 39, projects beyond the ring frame 38, and receives the sound conveying tube 42, which is preferably made flexible, and which has at its free end a mouth-piece 43, the particular construction of which will hereinafter be more fully described.

The disk 4, which is in the nature of a rotary table, has hereinbefore been described and is shown in the drawings as reduced in thickness on that portion of the periphery which overlaps the inner wall of the pan 6, and if this construction is used, the disk 4, must be removable from the shaft 2. It is, however, also practicable to make the disk or revolving table, in two parts, the lower part of which extending only to within a short distance of the upper edge of the inner wall 11, of the pan, while the upper part extends over that edge to within a short distance of the outer wall of the pan. This is indicated by a dotted line in Fig. 2, and if this construction is adopted, only the upper thinner part of the table is removable from the upright shaft 2, while the lower thicker part of the table may be fixed to that shaft.

When a sound record is to be made, a record tablet of the kind described in my aforesaid Letters Patent, is placed upon the rotary table 4, and this record tablet is represented in the drawings as a circular disk 44, which has a central perforation passing over the upper end of the shaft 2. Sometimes it is convenient to interpose between the record tablet and the rotary supporting table a thin disk 45, of felt, or of some other non-resonant material. This, however, is not essential. Upon the record tablet is placed a clamping plate 46, which by preference is provided with a hub 47, which is slipped over the upper end of the shaft 2. This upper end of the shaft 2, is screw-threaded as shown, and a thumb-nut 48, is then screwed down upon the hub of the clamping plate, whereby the record tablet is securely fastened in position.

At one end of the base plate 1, there is mounted a standard 49, which may be a split tube as shown, and in which is supported by friction a stem 50, projecting from the bottom of a shelf 51, and which in turn supports a vessel 52, containing alcohol. From the bottom of this vessel extends a tube 53, preferably provided at its free end with a flexible nozzle 54; and a stop-cock 55, with which the tube is provided permits the operator to regulate the flow of alcohol from the nozzle. With my present improvement it is necessary that during the whole process of tracing the record, the record tablet be covered with a film of alcohol, and for this purpose a thin stream of alcohol is directed upon the center of the tablet, or rather upon the clamping plate 46, from which the alcohol spreads in all directions by centrifugal force, and flows over into the pan 6. When the tracing of the record has been completed, the clamping plate is removed and the record tablet also is lifted from its support by the insertion between the same of a sharp edge, such as a knife blade, or even by the finger nails of the operator, and is removed for further manipulation as described in my aforesaid Letters Patent, and also for the manipulation which will be described hereinafter.

Only a very small quantity of alcohol is used for producing a single record, but after continued use of the machine a considerable amount of alcohol accumulates in the pan, and this is removed by removing the table 4, or the upper, thinner part thereof, as the case may be, by inserting a finger in each of the pouting lips 9, and thus lifting the disk or table 4, from the shaft 2. The pan is then removed from the bracket 7, and the alcohol

is poured out and preferably back into the vessel 52, by one of the pouring lips.

The recording diaphragm 56, is mounted in the circular frame 40, between a ledge formed on said frame and an annulus 57, screwed down upon the same by screws 58, as shown, or in any other suitable manner. On the rear side of that diaphragm there is applied a small block 59, of hard rubber from which extends radially an arm 60, which at its free end is turned up at right angles, outwardly and into contact with the lever 61, which carries the recording stylus 62.

The block 59, is fastened to the center of the diaphragm by a screw 63, passing through the diaphragm and through a washer 64, applied to the front side of the diaphragm. The head of this screw is faced with a disk 65, of soft rubber, and against the same bears the point of an adjusting screw 66, which is mounted in a perforated disk or spider 67, fixed in the neck 39.

The lever 61 is mounted on a plate 67', formed with a slot 68, through which a set screw 69, fixed in the annulus 57, passes. The plate 67', can thus be adjusted to various positions on the annulus, and is clamped in the adjusted position by a thumb-nut 70. One end of the plate 67' is bifurcated, and screws 71, 71, passing through the legs of the fork, are formed at their ends with bearings for the pivot points of the arbor 72, which is fixed to the lever 61. This lever, is made as light as practicable and as is consistent with rigidity, and the plate 67', together with the lever 61, which it carries, is so adjusted that the upturned end of the arm 60, bears upon the lever at the greatest practicable distance from the axis of the spindle 72, viz: at the free end of the lever. The connection between the lever and the upturned end of the arm 60 is made by a small quantity of pitch, 60', which acts as an efficient cement, and which is applied after the lever has been adjusted to its proper position. This mode of connecting the lever with the arm 60, and thereby with the diaphragm, I have found to be of great advantage for a variety of reasons, but more especially on account of the ease with which the connection is made, and unmade in case of repair, and on account of the damping effect it has upon the lever.

To the end of the lever 61 is secured the recording stylus 62, by solder or otherwise, with its plane at right angles to the plane of the lever, as shown. The stylus is composed of a flat, and rather thin plate of spring steel, pointed at its free end, and provided with a tracing point 62'', of iridium. The broad portion of the stylus is damped by one or two bands 72', of soft rubber, which are simply slipped over the same.

By reference to Fig. 4, it will be seen that the lever 61, with the recording stylus 62 extend across the diaphragm upon a line which constitutes a chord but not a diameter of the circle of the diaphragm. They are, therefore, eccentrically mounted with reference to the center of the diaphragm; but notwithstanding this eccentric location, the lever is rigidly connected with the center of the diaphragm and thus receives the maximum amplitude of its vibration. By thus placing the lever with the stylus eccentric with reference to the center of the diaphragm both the lever and the stylus may be and are made shorter than if they were located on the line of a diameter of the diaphragm. This is an important result, since the shorter the lever and stylus, the less liability there is of lost motion, and the less liability there is of extra or spontaneous vibrations of the lever and stylus, and both of these facts conspire to produce an accurate tracing of the sound waves impinging against the diaphragm.

Where the stylus passes over the edge of casing 40, the latter, together with the annulus 57, is cut away upon a straight line, as indicated at 57'. This permits a further reduction of the length of the stylus, since the record tablet may be located close to the straight edge 57'.

The body of the stylus is normally curved downwardly, as shown in dotted lines at 62', but when the diaphragm holder or frame 40, is turned to cause the stylus to impinge upon the record tablet, which is the preparatory step for making a record, the stylus is unbent and becomes straight, as shown in solid lines in Fig. 4; and I have found that the best results are obtained when the stylus is at an angle of about forty-five degrees with the plane of the tablet. The maximum pressure of the stylus upon the record surface is therefore equal to the force required to unbend the stylus. It is very small, because the stylus is made as thin as practicable, and it is uniform for different records and for all parts of the same record.

The mouth piece, into which vocal sounds are uttered for recording, is shown at 43, in Figs. 1 and 8, and it consists of a bell shaped structure, the small end of which is secured to the sound conveying tube, while the wide, flaring end is turned toward the speaker who applies his mouth to the opening. Near the edge of the mouth opening there is a perforation 43', cut into the wall of the mouth-piece, and this perforation is of such shape and size, and at such distance from the edge of the mouth-piece, as to fit approximately the edge of the nose of the speaker; so that when the mouth-piece is applied, the sounds uttered by the mouth enter the wide, flaring opening, while the sounds uttered by the nose enter the perforation 43'.

In making a record of vocal sounds, it is necessary that all sound waves composing the words or the song be conveyed to the diaphragm, and it has, therefore, been proposed to make mouth-pieces of such size and shape as to admit within the opening both the mouth and the nose of the speaker or singer, and to fit against the face of the user around the

mouth and nose. Mouth pieces of this character are necessarily large and clumsy, and do not readily and comfortably fit different persons, while with my construction the size of the mouth-piece is reduced, and will comfortably fit different speakers.

By means of the apparatus so far described, a record of sound waves is made in the following manner: The spring catch 35, 36, is drawn back, which permits the spring 34, to lift the block 30, from the screw 20, so that the carriage 23, may be freely moved to the left, whereby the stylus 62, is carried beyond the edge of the rotary table 4. A record tablet prepared in the manner described in my aforesaid Letters Patent is then placed upon the table 4, and clamped to the same, as hereinbefore described, and the carriage 23, is moved toward the right until the point of the recording stylus is above the tablet but within the edge of the same. The casing 40, is then turned in its bearing 38, until the point of the stylus impinges upon the tablet and is unbent, as shown in Fig. 4. In this position the casing 40, is clamped by means of the screw 41. The stop-cock 55, is then opened and a thin stream of alcohol is directed upon the clamping disk 26. The wheel 17, is now rotated by means of the crank and handle 16, whereby, by means of the gearing described, the record tablet is rotated, while the stylus is carried across the face of the tablet in a radial line, removing from the tablet a fine spiral line of the fatty etching ground with which it had been covered. Sound waves are now directed against the diaphragm in any desired manner, and if vocal sounds are to be recorded, the sound conveying tube 42, with the mouth piece 43, will be used. The vibrations of the diaphragm thus produced will cause the stylus to make a tracing of an undulatory line, corresponding to the sound waves directed against the diaphragm; all as described in my aforesaid Letters Patent. During this whole time a thin stream of Alcohol is delivered upon the plate 46, and the alcohol spreading out in all directions is maintained as a uniform and constantly renewed film upon the tablet. In this manner every part of the record is made under alcohol, and in this respect my present invention differs from the process set forth in my aforesaid Letters Patent.

In accordance with the said patent, alcohol is poured once for all over the tablet, and is allowed to evaporate during the process of recording. I have found that in this manner it often happens that the alcohol has entirely evaporated before the record is completed, so that a portion of the latter is made upon a dry tablet; whereby the accumulation of filamentary particles of dust on the point of the stylus, which the alcohol is designed to avoid, takes place during the production of a portion of the record. With my present improvement this defect is cured, since it maintains the record tablet moist with alcohol from the beginning to the end of the operation.

After the tracing of the record has been completed, the tablet is speedily removed and before the record is fixed by etching as described in my aforesaid patent, the alcohol adhering to the record surface is quickly washed off with water. This is an important step in my improved process and greatly improves the definition of the record by etching. The reason for this is, that the alcohol slightly attacks and dissolves the fatty etching ground, so that the thin film of alcohol remaining upon the tablet, contains a slight quantity of that ground in solution. If now, the film of alcohol is allowed to evaporate an exceedingly small quantity of the dissolved ground is deposited upon the metal which has been laid bare by the stylus. This small deposit of ground sufficiently resists the action of the etching fluid to impair the definition of the final record. By simply pouring water over the record surface immediately after the tablet has been removed from the recording apparatus the film of alcohol and the ground held in solution by the same is removed, and the tracings of the stylus present a clean metallic surface, which is properly attacked by the etching fluid.

The reproducing apparatus as a whole is represented in Fig. 3.

Upon a base board 73, in standards 74, is journaled a shaft 75, upon which are mounted a driven pulley 76, a fly-wheel 77, and a friction disk 78. The latter is in frictional engagement with a rotary table 79, which is mounted upon a vertical shaft substantially in the manner described with reference to the rotary table 4, of the recording apparatus. Fig. 5, being a perspective view, the mounting of the table 79, is not visible, but is easily understood from the foregoing description. The upper surface of the table is preferably covered with a sheet of felt or other elastic and non-resonant material, as indicated by appropriate shading.

Upon the felt covered table 79, the record tablet 44, is placed and is clamped thereon substantially in the manner in which this is done in the transmitting apparatus, i. e., by means of a clamping plate 46, and a thumb-nut 48. A driving wheel 80, mounted on a shaft 81, which is journaled in standards 82, is rotated by means of a crank 83, and handle 84, and gives motion to the table 79, by means of a crossed belt or cord 85. The relation of the table 79, to the friction disk 78, is the same as the relation of the table 4, to the friction disk 12; that is to say, the table rests with the greater part of its weight upon the friction disk, so that the frictional gearing is automatically maintained. A post 86, mounted upon the base-board 73, has swiveled upon its upper end a fork 87, between the prongs of which is pivoted the swinging arm 88, which extends over the table 79, and has at its free end a clasp 89, which receives the neck 90, which projects from the center on one side of the casing 91, of the reproducing

diaphragm 92. This casing with its diaphragm, stylus and appurtenances, which will presently be described, can be thus turned in the clasp, and can be fixed in any adjusted position by a clamp screw 93.

Upon the end of the neck 90, which projects beyond the clasp 89, is slipped a flexible tube 94, which in turn receives the small end of a sound conveying trumpet 95, the flaring end 96 of which is turned toward the listener. A bracket 97, secured to the swinging arm 88, carries at its free end an elastic fork 98, which receives and supports the trumpet, and the parts are so proportioned that the free end of the swinging arm preponderates, so that the point of the reproducing stylus, which will presently be described, presses rather firmly upon the record tablet.

It will now be understood, that when a record tablet, having a record of sound waves upon its surface, produced in accordance with my invention, is mounted upon the table 79, and when the point of the stylus is adjusted in engagement with the record groove, and the wheel 80, is rotated, the rotating record groove will guide the stylus across the face of the tablet, and will at the same time vibrate the stylus and diaphragm in accordance with the undulations of the record groove. The sound waves thus produced by the diaphragm will issue from the flaring opening of the trumpet, and the sounds will be heard by a listener in front of the trumpet, or in its vicinity.

The reproducing diaphragm is mounted in the casing 91, in the usual manner, being held against a ledge by means of an annulus 99. On this annulus is formed a swelling or block 100, and diametrically opposite to the same the stylus carrying spring 101, is fastened to the annulus, and extends across the face of the diaphragm and beyond the edge of the annulus. This spring 101, is a leaf spring which faces with its flat side the face of the diaphragm up to a point beyond the center of the latter, and is then twisted at right angles, as indicated at 102, and crosses the annulus edgewise as shown at 103. The tendency of the part 101, of the spring is to press toward the diaphragm, whereby the edge of the part 103, is made to bear with some force upon the annulus 99: and the tendency of the part 103, is to press against the swelling or block 100. The spring is therefore elastic in two directions at right angles to each other.

In order to prevent grinding of the spring against the annulus and against the block 100, a U-shaped piece 104, of soft rubber embraces the outer portion 103, where it bears upon the annulus and against the block. This soft rubber cushion also serves as a dampener for the spring. At the point where the spring passes over the center of the diaphragm, it has a perforation 105, and a screw pin 106, secured to the center of the diaphragm by two nuts 107, 108, extends loosely through the perforation. A thumb-nut 109, also placed on the screw-pin 106, and a soft rubber washer 110 between the thumb-nut and the spring serve to regulate the tension of the latter and of the diaphragm, as will be readily understood.

On the free end of the spring 101, 103, there is secured a binding post 111, in which the stylus 112, is held by the set screw 113, and may be adjusted to project to the required distance beyond the end of the spring. This stylus is preferably made of hard steel. It has a slender point, but the point should not be so sharp as to cut the bottom of the record groove which it engages.

In the operation of reproducing the sounds recorded on a tablet, the stylus is guided by the walls of the record groove, and not by the bottom of the same. Consequently it is not essential that the point of the stylus be in contact with the bottom of the groove In fact it is preferably not in contact with the same, so that this point may be made rather dull.

The sounds emitted by the reproducing diaphragm are very powerful and ordinarily too loud to be received with comfort by a listener in front of the trumpet or other receiving tube. For this reason I have found it sometimes necessary to reduce the volume of the emitted sound before it reaches the ear, and this I accomplish by one or more perforated and exchangeable diaphragms 114, placed in the neck 90. These diaphragms should be made of some non-resonant material like soft rubber, or cork, as indicated by appropriate shading.

Having now fully described my invention, I claim and desire to secure by Letters Patent—

1. The method of recording vocal and other sounds which consists in removing from a record tablet covered with a fatty film, undulatory lines of said film by, and in accordance with the sound waves and maintaining at the same time a layer of a fluid over the film, substantially as described.

2. The method of recording vocal and other sounds upon a rotating disk covered with a fatty film which consists in spreading over said film and continuously renewing over the same a layer of a fluid and at the same time removing from said tablet undulatory lines of the fatty film by and in accordance with the sound waves, substantially as described.

3. The improvement in the art of making a gramophone record which consists in immersing and maintaining the tablet and the point of the recording stylus in alcohol during the process of recording, substantially as described.

4. The improvement in the art of making and fixing a gramophone record which consists in removing from a tablet covered with a fatty film undulatory lines of said film by and in accordance with sound waves while said film is covered with a layer of alcohol; then immediately removing the alcohol with water and then subjecting the tablet to the

action of an etching fluid, substantially as described.

5. The method of reproducing sounds from a record of the same which consists in vibrating a stylus and propelling the same along the record by and in accordance with the said record, substantially as described.

6. In a gramophone, a recording stylus pressing by its own elasticity upon the record tablet at right angles to the plane of its vibratory movements and consisting of a leaf spring terminating in a point of harder material than that of the body of the stylus, substantially as described.

7. In a gramophone, the combination of a sound receiving diaphragm and an elastic recording stylus controlled by the diaphragm and adjustable with reference to a record tablet so as to press by its own elasticity upon the same at right angles to the plane of its vibratory movements, substantially as described.

8. In a gramophone a recording stylus pressing by its own elasticity upon the record tablet at right angles to its plane of vibratory movements, and consisting of a leaf spring terminating in an iridium point, substantially as described.

9. In a gramophone, a recording stylus composed of a leaf spring terminating in a tracing point in combination with one or more elastic non-sonorous dampers, substantially as described.

10. In a gramophone a recording stylus formed of a leaf spring terminating in a tracing point in combination with one or more sleeves of soft rubber upon the leaf spring for damping the same, substantially as described.

11. In a gramophone, the combination of a sound receiving diaphragm, a lever and a recording stylus carried by the same, both extending parallel but eccentrically over the diaphragm; with a connection between the center of the diaphragm and the lever, substantially as described.

12. In a gramophone, the combination of a sound receiving diaphragm a lever and a recording stylus carried by the same, both extending over the face of the diaphragm, but eccentrically thereto, with a rigid connection between the center of the diaphragm and the free end of the lever, substantially as described.

13. In a gramophone, the combination of a circular sound receiving diaphragm, a lever and an elastic recording stylus both extending parallel with the diaphragm on the line of a chord, with a rigid connection between the center of the diaphragm and the free end of the lever, substantially as described.

14. In a gramophone, the combination of a sound receiving diaphragm, a lever and an elastic stylus carried by the same, both extending parallel, but eccentrically thereto; with a bracket rigidly connected with the center of the diaphragm and removably connected to the lever, substantially as described.

15. In a gramophone, the combination of a sound receiving diaphragm mounted in a suitable frame, a bracket adjustably mounted on said frame, a lever pivoted in said frame extending parallel to and eccentrically with reference to the center of the diaphragm, and an elastic recording stylus carried by the lever; with a mechanical connection between the center of the diaphragm and the free end of the lever, substantially as described.

16. In a gramophone a sound receiving diaphragm and a tube for conveying sound waves thereto in combination with a recording stylus receiving motion from the diaphragm, and a screw mounted in the sound conveying tube bearing centrally upon the diaphragm for adjusting the tension of the latter, substantially as described.

17. In a gramophone, the combination of a horizontal rotary table adapted to support a record tablet, and a vertical shaft free to move longitudinally, carrying the table; with a friction disk engaged by the under side of the table for rotating the latter, substantially as described.

18. In a gramophone the combination of a horizontal rotary table mounted upon a vertical shaft and adapted to support a record tablet; with a friction disk engaging the under side of the table and partly sustaining the weight of the table, whereby the latter is automatically maintained in frictional gear with said disk, substantially as described.

19. In a gramophone, the combination of a rotary horizontal table adapted to receive and support a flat record tablet; with a reservoir of a suitable fluid, such as alcohol, discharging upon the center of the table and tablet, and an annular pan disposed underneath the table for receiving the overflow of alcohol, substantially as described.

20. In a gramophone the combination of a horizontal rotatable table adapted to receive and support a record tablet; with a reservoir of alcohol discharging upon the center of the table and tablet, an annular pan disposed under the edge of the table for receiving the overflow of alcohol, and a friction disk bearing upon the under side of the table between the center of the same and the inner wall of the pan, substantially as described.

21. In a gramophone, the combination of a horizontal rotary table adapted to receive and support a record tablet, a recording diaphragm and stylus connected by gearing with the table to move radially over and with the stylus in operative relation to the same, substantially as described.

22. In a gramophone, the combination of a horizontal rotating table adapted to receive and sustain a flat record tablet, with a carriage movable in a line parallel to a radius of the table, a recording diaphragm and stylus carried by the carriage with the stylus in operative contact with the record tablet, and

gearing connecting the table with said carriage, substantially as described.

23. In a gramophone, a sound conveying tube provided with a mouth piece having a flaring opening for the application of the mouth of the speaker and a perforation in the side wall of the mouth piece separated from and spaced with reference to the mouth opening and shaped to correspond to the shape of the nostrils of the speaker, substantially as described.

24. In a gramophone a sound reproducing diaphragm in combination with a stylus lever extending diametrically across the same, and elastic in two directions at right angles to each other, substantially as described.

25. In a gramophone, the combination of a diaphragm and a stylus carrier composed of a leaf spring twisted at one point so as to bring the edge of one portion at right angles to the face of the other portion, whereby it is elastic in two directions, substantially as described.

26. In a gramophone the combination of a reproducing diaphragm and stylus; with a stylus carrier composed of a leaf spring extending flat-wise over the face of the diaphragm and edgewise over the edge of the diaphragm, substantially as described.

27. In a gramophone the combination of a reproducing diaphragm mounted in a suitable frame the latter being provided at one point with a boss or stop; with a double elastic stylus carrier composed of a twisted leaf-spring tending toward the diaphragm and against the boss or stop, substantially as described.

28. In a gramophone, a reproducing diaphragm and stylus in combination with an elastic stylus carrier extending over the face of the diaphragm and tending toward the same, of an adjustable connection between the diaphragm and stylus carrier and adjustable for varying the pressure between diaphragm and style carrier, substantially as described.

29. In a gramophone the combination of a reproducing diaphragm mounted in a suitable frame provided with a boss or stop; with a double elastic stylus carrier tending toward the diaphragm and toward the stop, and elastic non-resonant dampers interposed between the style carrier and the diaphragm and between the style carrier and the frame and stop, substantially as described.

30. In a gramophone a sound reproducing diaphragm and a sound conveying tube for the same, with one or more non-resonant perforated diaphragms in the said tube for reducing the volume of sound conveyed to the ear substantially as described.

31. In a gramophone a recording stylus pivoted to move in response to the vibrations of a diaphragm and elastic in a plane at right angles to such motions, substantially as described.

32. In a gramophone, a reproducing stylus having a wedge-shaped point engaging the walls of the record groove, substantially as described.

33. In a gramophone reproducer, a stylus carried or formed by a spring fixed at one end to the diaphragm holder and freely extending across and beyond the same and operatively connected with the center of the diaphragm, substantially as described.

34. In a gramophone reproducer, a spring constituting or carrying a stylus, fixed at one end to the diaphragm holder and extending across and beyond the periphery of the same and freely pressing against the diaphragm, substantially as described.

35. In a sound reproducing apparatus consisting of a traveling tablet having a sound record formed thereon and a reproducing stylus shaped for engagement with said record and free to be vibrated and propelled by the same, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

EMILE BERLINER.

Witnesses:
HENRY E. COOPER,
F. T. CHAPMAN.

463
(No Model.)

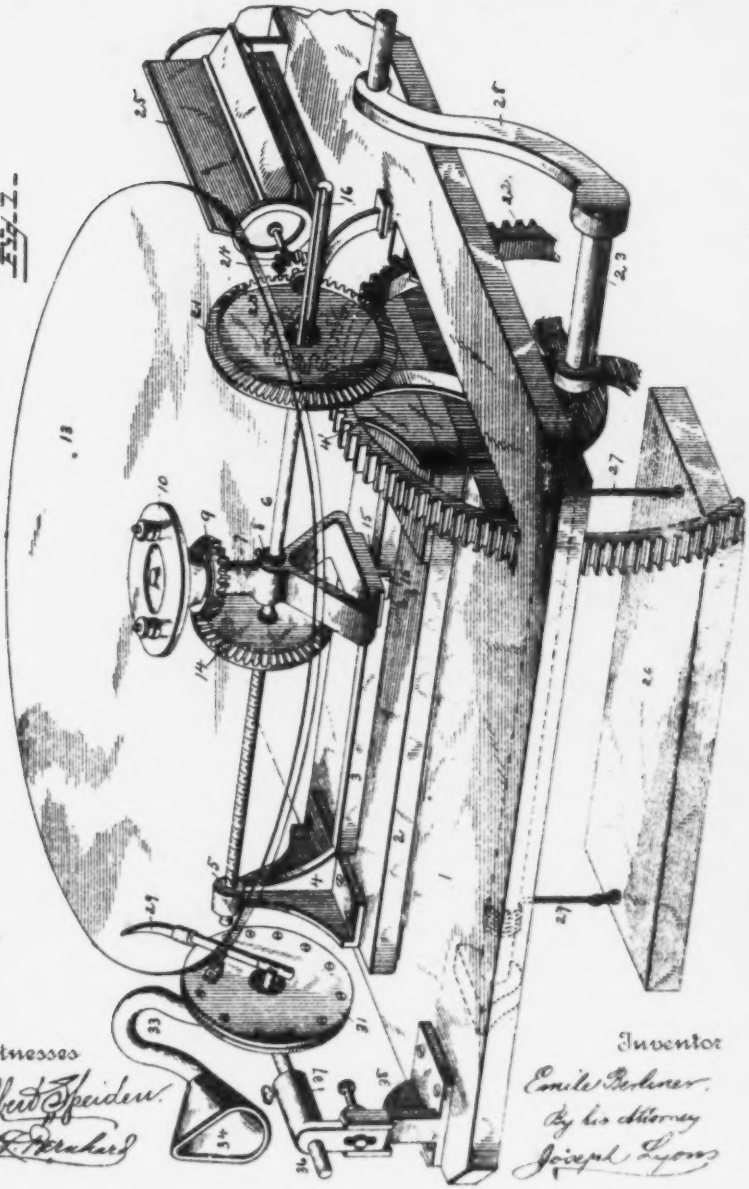
3 Sheets—Sheet 1.

E. BERLINER.

GRAMOPHONE.

No. 564,586. Patented July 28, 1896.

Fig. 1.



Witnesses
Albert Speiden.
D. Richard

Inventor
Emile Berliner.
By his Attorney
Joseph Lyon

464
(No Model.)

3 Sheets—Sheet 2.

E. BERLINER.

GRAMOPHONE.

No. 564,586. Patented July 28, 1896.

Fig. 2.

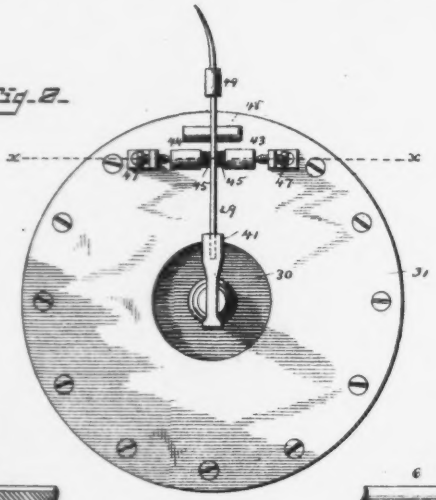


Fig. 6.

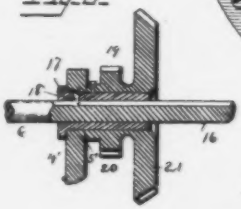


Fig. 7.

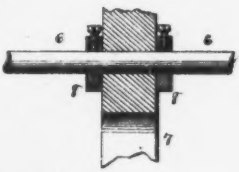


Fig. 4.

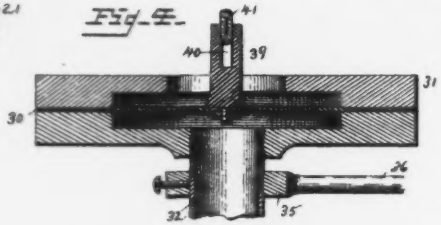
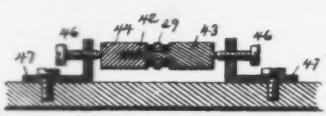


Fig. 5.



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465

(No Model.)

3 Sheets—Sheet 3.

E. BERLINER.

GRAMOPHONE.

No. 564,586. Patented July 28, 1896.

Fig. 9.

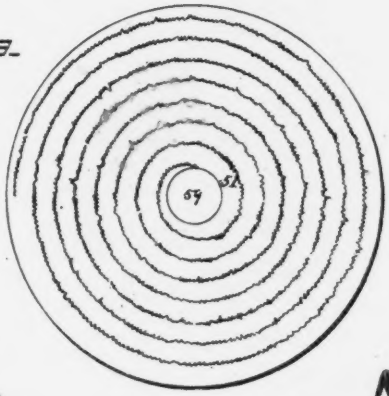


Fig. 8.

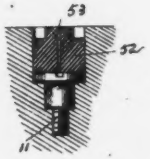


Fig. 10.

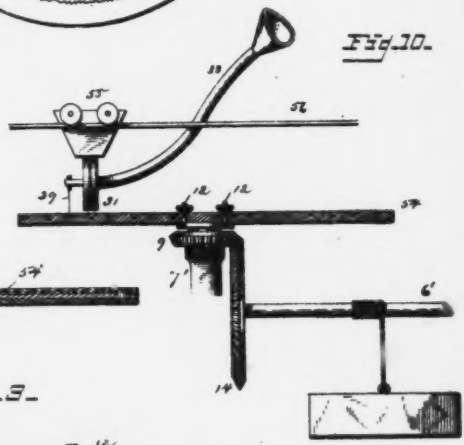
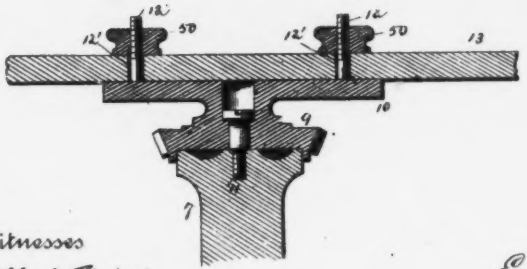


Fig. 11.

Fig. 3.



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UNITED STATES PATENT OFFICE.

EMILE BERLINER, OF WASHINGTON, DISTRICT OF COLUMBIA, ASSIGNOR, BY MESNE ASSIGNMENTS, TO THE UNITED STATES GRAMOPHONE COMPANY, OF WEST VIRGINIA.

GRAMOPHONE.

SPECIFICATION forming part of Letters Patent No. 564,586, dated July 28, 1896.

Application filed November 7, 1887. Serial No. 254,641. (No model.) Patented in England November 8, 1887. No. 15,232.

To all whom it may concern:

Be it known that I, EMILE BERLINER, a citizen of the United States, residing at Washington, in the District of Columbia, have invented certain new and useful Improvements in Gramophones, of which the following is a specification.

My invention has reference to improvements in methods of and apparatus for recording and reproducing spoken words and other sounds, and it is primarily intended as and constitutes an extension and improvement of my gramophone which I have described in Letters Patent No. 372,786, granted to me on November 8, 1887, and for which I have also received Letters Patent of Great Britain, No. 15,232, dated November 8, 1887. In said patents I have described a method of recording and reproducing sounds, which consists in first causing the sounds to inscribe themselves upon a layer of non-resisting material in a manner substantially like that practiced by the well-known Léon Scott phonautograph, then copying the phonautographic record in solid resisting material, preferably by the photo-engraving process, and then reproducing the sounds from the solid copy of the record. The original record, as well as the copy of the same, is thus obtained as an undulatory line of even depth, as distinguished from a line of varying depth obtained by the ordinary phonograph and by the graphophone.

In my present invention I retain all the fundamental features of my gramophone, but introduce certain novel features both in the process and in the apparatus, which render the attainment of the objects of a sound recorder and reproducer more certain and more perfect.

In the original form of my gramophone I employed a curved (cylindrical) surface upon which the non-resisting medium used for recording was supported. This had the disadvantage that for the purpose of copying the record by the photo-engraving process such surface had to be first straightened and the flat copy obtained from the same had to be bent again to the original cylindrical form of the record-surface. This involved delicate and tedious manipulations, which I avoid in my present invention by inscribing the record of sounds upon a flat plate, and I further improve the process by arranging that flat plate horizontally, or nearly so, and by inscribing the record upon the under surface of the same, whereby the material removed by the recording-stylus drops away from the plate and leaves the undulatory groove of even depth, clean, and well defined, whereas by the old method the material removed by the stylus accumulated in and about the adjacent grooves.

I have further improved the process by using a transparent plate as a support for the non-resisting medium. This plate is therefore made either of glass or some other like substance, whereby I secure several important advantages. The most important of these advantages is that it enables me to work with parallel transmitted rays of light in the subsequent process of photo-engraving, in which the original record is thus used as a negative, which may be directly applied in contact with the sensitive photographic plate, and another important advantage is the reduction of the friction of the stylus upon the supports to a minimum.

The process is further improved by the employment of a new recording medium. In the original process I used a layer of lampblack pure and simple, and this substance is well adapted for the purpose on account of the slight coherence of the particles; but by reason of the flocculent nature of this substance the lines drawn upon it are more or less ragged, as can be observed under a microscope, and the photo-engraving obtained from such record displays all the defects of the original. In my improved process I employ a layer of a semifluid ink or paint, of such consistency and thickness that it will neither subside nor flow spontaneously. Such ink is practically structureless, and the lines drawn upon it are exceedingly sharp and reveal no ragged edges under a powerful microscope, and the photo-engraving from such record is far superior to a like copy from a record produced under the former process.

My invention also comprises other minor improvements in the process, and it also covers novel features in the apparatus, all of which

will more fully appear from the following detailed description, in which reference is made to the accompanying drawings, in which I have illustrated convenient forms of apparatus which I have used, without, however, limiting myself to the exact details of the same.

Figure 1 is a perspective view of my improved gramophone. Fig. 2 is a plan view of the diaphragm, with its support and accessories. Fig. 3 is a vertical section showing the recording-disk and its connection with the driving-wheel. Fig. 4 is a sectional view of the diaphragm, its support, and accessories. Fig. 5 is a cross-section on line x x of Fig. 2. Fig. 6 is a sectional view of a part of the driving-gear. Fig. 7 is a section showing the connection of the driven shaft with the support of the recording-disk. Fig. 8 is a sectional view of a centering device. Fig. 9 is a plan view, upon a reduced scale, of a disk with a record of sounds recorded upon the same in accordance with my invention. Fig 10 is a sectional elevation of a modified form of my reproducing apparatus, and Fig. 11 is a sectional view of a dampened reproducing-disk.

Referring now to the drawings, in which the details are marked by numerals, there is a platform 1, suitably supported, and upon this platform are mounted the operative parts of the apparatus. A metallic plate 2, provided with a longitudinal rib 3, is secured upon the platform, and standards 4 4', mounted upon plate 2, are provided with a nut-bearing 5 and a smooth bearing 5', (see Fig. 6,) respectively, for shaft 6, which extends through these bearings, as shown. One-half, more or less, of this shaft is screw-threaded, as shown, and enters the nut-bearing 5, and at a point near the middle said shaft passes loosely through a movable support 7, the position of which upon the shaft is determined by two collars 8 8, as indicated in Fig. 7.

The support 7 serves as a bearing for a bevel-gear 9, which is centrally perforated and widens out into a circular flange 10. Upon its under side the bevel-gear 9 is recessed, and said recess fits loosely over the upper end of support 7. A screw 11, passing loosely through the central perforation of bevel-gear 9, screws into the head of support 7, so that the bevel-gear can rotate about its axis, which coincides with the axis of screw 11. Two screw-pins 12 12, which may be either fixed or removable, project at diametrically opposite points from flange 10, and are designed to pass through two similarly-located holes in a glass plate 13, as will be more fully described hereinafter.

A bevel-gear 14, fixed upon shaft 6, engages bevel-gear 9, but provision is made for releasing gear 14 from the shaft, if desired, for a purpose which will be explained farther on. As stated above, the screw-threaded portion of shaft 6 passes through nut-bearing 5, and it will now be clear that if shaft 6 is rotated bevel-gear 9, with its flange 10, will likewise rotate, and will at the same time advance in a straight line, since shaft 6, screwing into or out of its nut-bearing 5, will carry bevel-gear 14 and support 7 with it. From the bottom of support 7 two lugs 15 15, one on each side of rib 3 of plate 2, serve to guide the support with the parts attached thereto in the line of said rib, which is, of course, parallel to shaft 6.

A part of the smooth portion of shaft 6 has a longitudinal groove 16 extending to the right-hand end of the shaft, as seen in Figs. 1 and 6, and a sleeve 17 loosely fitting this portion of the shaft has a pin 18, the end of which engages groove 16, as shown in Fig. 6, so that the shaft is free to slide longitudinally through sleeve 17 and will rotate with the same if the latter is rotated.

Sleeve 17 is fitted into bearing 5' of standard 4', so as to rotate within the same, and upon that part of the sleeve which projects beyond the bearing is keyed the compound gear 19. The latter is composed of a pinion 20 and a bevel-gear 21, and a rather large bevel-wheel 22, mounted upon a shaft 23 below platform 1, meshes with pinion 20.

A small bevel-gear 24 meshes with gear-wheel 21, and to the shaft of gear 24 are secured fans 25, which are thus driven at a high speed and serve as a regulator, as will be readily understood by those skilled in the art.

A weight 26 is suspended by cords or chains 27 from shaft 23, and if said shaft is turned by a crank 28, or otherwise, in one direction the cords or chains are wound upon the same, as indicated in Fig. 1, and the weight 26 is raised up toward the platform. If, on the other hand, the weight is allowed to descend, it will rotate shaft 23, this in turn will rotate gear-wheel 22, which, meshing with pinion 20, will rotate the latter and the connected shaft 6, and in the manner hereinbefore described support 7 will receive a rectilinear motion, while flange 10, upon bevel-gear 9, will both rotate and move in a straight line. For every complete revolution of bevel-gear 14 support 7 and bevel-gear 9, with its connected flange 10, will be moved in the line of a diameter a distance equal to the pitch of the screw-threads upon shaft 6, and it will now be understood that if a plate 13 is fixed to flange 10 and a fixed pencil or stylus be lightly pressed upon the plane surface of said plate a spiral line will be drawn upon the plate.

The recording-stylus 29 is mounted upon a diaphragm 30, and the diaphragm itself, which may be of any suitable sonorous material, is mounted in a case 31, and a rigid tube 32, projecting from one side of the case, communicates with a flexible tube 33 and a mouth or ear piece 34. The tube is clamped and may be adjusted in the direction of its length in a ring 35, formed at the end of a rod 36, which is adjustable in a support 37, and the latter is again adjustable vertically in a standard 38 mounted upon platform 1. A

metal post 39 is fixed to the center of the diaphragm, as shown, and its free end has an axial slot 40, into which a soft-rubber tube 41 is forced and flattened. The free end of the soft-rubber tube receives the stylus 29, which may be of metal or any other hard and fairly elastic material.

Preferably the stylus is made of a flat strip of phosphor-bronze extending radially over the face of casing 31 and some distance beyond the edge of the same. At its free end the stylus is reduced to a point and is curved upwardly, and by turning the diaphragm-case about the axis of tube 32, or by turning rod 36 in its bearing 37, or by adjusting the latter upon bracket 38 the point of the stylus may be brought into light contact with the lower face of disk 13 at a point in the diameter of said disk which is parallel with shaft 6.

Near the middle of its length a hole is produced through the stylus, and a pin 42, formed at one end of a metal block 43, passes through said hole and into the central bore in a similar block 44. Between each block and the adjacent face of the stylus a soft-rubber washer 45 is inserted, and the two blocks are forced together and are made to clamp the stylus between the rubber washers by means of the pointed screws 46, working in the supports 47. The screws 46 46 thus constitute the pivotal supports of the stylus, which is a true two-armed lever. A piece of soft-rubber tubing 48 is inserted between the outer arm of this lever and the casing 31, and another piece of soft-rubber tubing 49 is slipped over the stylus between the elastic support 48 and the outer end. Thus it will be seen that the stylus is elastically supported and amply dampened, and that if the diaphragm vibrates under the impact of sound-waves the free end of the stylus will move to the right and to the left of its position of rest and parallel to the face of disk 13.

The disk 13 is preferably made of glass. It is of suitable diameter and thickness, and has two holes 12' 12', corresponding to the pins 12 12 projecting from flange 10, and is placed in position upon said flange with the pins entering the holes. The nuts 50 50 are then screwed down, whereby the glass disk is securely clamped.

The method of recording and reproducing recorded sounds by means of this apparatus will now be easily understood.

As has been stated above, the non-resisting material upon which the sound-record or phonautogram is produced is a semifluid, and I can use for this purpose any ink, as, for instance, printers' ink, of the required consistency. An even layer of this ink may be spread over the under surface of the glass disk in any suitable manner, as, for instance, by means of a brush or roller while the disk is slowly turned; but I prefer to produce the ink directly upon the disk itself, and I proceed in the following manner: The under surface of the glass disk is first carefully polished and dried, and is then covered with a thin film of oil by means of a camel's-hair brush. This is done while the disk is rotated with moderate speed. Any oil or fat may be used, but I have found linseed-oil specially adapted for the purpose. A smoky flame is then held under the glass plate while the latter is slowly rotated, whereby the lampblack ascending from the flame is intercepted by the plate and becomes deposited upon the same in a very fine layer, which, however, is instantly absorbed by and mixes intimately with the thin layer of oil, thus forming a black amorphous ink, covering the under surface of the glass disk in an even exceedingly thin layer. It is essential that the lampblack be deposited upon the oiled disk by the described process of sublimation; that is to say, the carbon particles must reach the disk and mix with the oil at the moment when their transition from the gaseous into the solid state takes place. If it were attempted to apply lampblack already formed by dusting upon the oiled disk, no intimate mixture resulting in an even layer of amorphous ink would be obtained. The coating of ink thus directly formed upon the disk has just the consistency and the thickness required. It will not flow spontaneously, and while it adheres well to the glass plate, it requires only a minimum force to remove it from the same, and the point of the stylus in its passage through the substance of the ink experiences no perceptible resistance. The disk is now ready to receive the phonautogram, and it is moved to the position shown in Fig. 1, with the point of the stylus near the outer edge. The point of the stylus is then adjusted into light contact with the disk, so that the coat of ink is barely penetrated by the same, and the weight 26 is allowed to descend and to rotate shaft 6 in the manner hereinbefore described. If now the stylus remained immovable, it would describe upon the under surface of the disk a smooth spiral the convolutions of which continuously decrease toward the center of the disk. The pitch of the spiral is determined by the pitch of the screw upon shaft 6 and by the relative angular velocities of said shaft and of bevel-gear 9, and may in practice be made as small as one-fiftieth of an inch. If now during the progress of the disk sound-waves are directed against the diaphragm through the mouth-piece 34 and tubes 33 and 32, the stylus will vibrate to the right and left of the spiral line, inscribing upon the disk an undulatory line of even depth, which line will truly and accurately represent the sounds uttered against the diaphragm. The stylus removes a very sharp line of ink from the disk, leaving the latter quite transparent at this line, while it is quite opaque and will not transmit light at the places not touched by the stylus. The ink removed by the stylus drops away from the disk, as stated above, and does not accumulate in and about the grooves.

An approximate idea of the phonautogram thus produced can be obtained by inspection of Fig. 9, which represents an undulatory spiral line upon a disk, with the pitch of the spiral and the undulations of the record greatly exaggerated. In the drawings, the undulatory line appears black upon a white ground, while in fact the line is transparent upon a black ground.

The phonautogram may extend to within a short distance from the edge of flange 10, and in practice the cords or chains 27 27 are made just long enough to drive the disk up to that limit, or the apparatus is mounted at the proper height above the ground so that the weight will be arrested before the limit of progress of the disk is reached. Bevel-gear 14 is then disengaged from bevel-gear 9 by unclamping the same from shaft 6 and sliding it upon the same a short distance to the left hand, (in the view shown in Fig. 1,) and the disk is then given a single rotation by hand, whereby the stylus describes a true circle 51 upon the disk. This circle, which I call the "centering-circle," is afterward utilized, as will presently appear. The glass disk, with the sound-record and centering-circle upon the same, is now removed, and the record may be fixed by applying a thin coat of varnish. It may then be handled with impunity. From this record I produce a copy in copper or any other metal by the process of photo-engraving, and in this process I use the original record as a negative, which enables me to work by transmitted light and with parallel rays, the negative being applied directly in contact with the sensitive photographic plate. The copy thus produced will have the exact size of the original, as is well understood by those skilled in the art. In the photo-engraved copy the sound-record appears as an undulatory line of even depth upon a solid metal disk, and the centering-circle 51 is reproduced in the same manner.

For reproducing the original sounds, the center of the centering-circle is determined by well-known simple geometrical constructions, and a small hole is drilled through that center, which hole corresponds to the mathematical axis about which the glass disk had been rotated, and also marks the axis about which the metal disk must be rotated by the apparatus shown in order that the pointed stylus applied to the starting-point of the record may follow the same from beginning to end. Two holes corresponding to the holes 12′ 12′ in the glass-disk are also made in the metal disk, but these holes are preferably made large enough to permit the disk to be adjusted in either direction when placed upon flange 10. Before this is done a well-fitting cylindrical block 52 is placed into that part of the cylindrical hole through the common center of flange 10 and bevel-gear 9 which is occupied by the head of screw 11, as shown in Fig. 8. This block, which I call the "centering-block," has a fine axial hole 53, which corresponds exactly to the mathematical axis of rotation of bevel-gear 9. If now the photo-engraved copy of the record is placed upon flange 10, with pins 12 12 passing through corresponding holes in the metal plate, a fine pin, say a sewing-needle, is passed through the centering-holes in the disk and in block 52, and the clamp-nuts 50 are tightly screwed down. By this simple process the metallic copy of the original record is safely and quickly centered in position. The stylus is then adjusted with its point in engagement with the outer end of the record-groove, and the weight 26 is allowed to descend. It will now be clear that the stylus will be forced positively to follow the undulations of the record, and that the diaphragm vibrating under the stylus will emit the same sounds which produced the original record, which sounds can be distinctly heard at the ear-piece 34.

Both the process and the apparatus thus far described may be modified in various ways without departing from the main features of my invention. So, for instance, I can dispense with the centering device and can rotate the record upon a stationary axis, if the diaphragm with its attached stylus is mounted in a manner to make it follow the spiral record. An arrangement of this character is shown in Fig. 10. The reproducing-disk 54 is in this case mounted as hereinbefore described, but without regard to the centering device. The support 7′ may be fixed in position so that the bevel-gear 9, mounted upon the same in the manner described with reference to Fig. 3, will turn without progressive motion. Bevel-gear 9, and with it the reproducing-disk 54, are rotated by a bevel-gear 14′ upon a shaft 6′, to which power is applied by a weight, as shown, or in any other suitable manner. The diaphragm-casing 31 is secured to a small truck 55 upon rails 56 arranged vertically above and parallel with a diameter of the reproducing-disk, and at such height above the same that the stylus 29 will be in engagement with the undulatory grooves of even depth which represent the record of sounds.

The listener applies his ear to the ear-piece, and when the shaft 6′ is rotated the stylus and diaphragm will be forced to vibrate, as in the apparatus shown in Fig. 1, but will at the same time move with the truck 55 across the face of disk 54. A tolerably good reproduction may also be obtained by simply holding one end of a reed between the teeth and the other pointed end of the same in engagement with the record-grooves while the disk is rotated.

The frictional contact of the reproducing-stylus with the surface of the ordinary metallic record gives rise to disturbing sounds, and with a view of avoiding the same I mount the reproducing-disk 54 (see Fig. 11) upon a rigid plate 58, and with a sheet 57, of

felt, soft rubber, blotting-paper, or other non-sonorous substance intervening. This dampens the extraneous vibrations of the reproducing-disk and renders the sounds emitted by the diaphragm very clear.

Additional clearness is obtained by nickel-plating the metallic record, which is ordinarily made of copper, since I have found that the sound due to the frictional contact of the stylus with a polished surface of nickel is very faint.

In place of the metallic copy of the original record I can use a copy made of sealing-wax, which is made from a metallic or other copy having the record in raised lines. The metallic copy is for this purpose first oiled and the molten sealing-wax is then poured over it and is then backed by plaster-of-paris or other rigid material. The cast is then easily removed from the metallic matrix and may be used for the reproduction of the recorded sounds, which will be quite clear and remarkably free of the disturbing sounds due to the friction of the stylus, especially when the surface is first gently rubbed with plumbago.

The metallic copy of the original record is in effect an engraved copper plate, and it may be used as such for printing upon paper, which then yields a copy in raised lines, as is well understood, and from this paper copy the sealing-wax copy or a copy of any other similar material may be made.

I desire to emphasize the fact that my recording and reproducing stylus is a flat elastic strip, which will yield in one direction, but not in the other. For this reason the recording and reproducing surface need not be absolutely plane, and the stylus will still retain contact with the same, while it will be positively moved to follow the undulations of the record in reproducing. The point of the stylus may be made of iridium.

Having now fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The method of producing a phonautogram, which consists in removing an undulatory line of even depth of a deposit of ink from a traveling plate, by and in accordance with sound-vibrations; substantially as described.

2. The method of producing a phonautogram, which consists in removing an undulatory line of even depth of a deposit of amorphous ink from a traveling support, by and in accordance with sound-vibrations; substantially as described.

3. The method of producing a transparent phonautogram, which consists in removing an undulatory line of even depth of a deposit of ink from a traveling plate of glass, by and in accordance with sound-vibrations; substantially as described.

4. The method of producing a transparent phonautogram, which consists in removing an undulatory line of even depth from a deposit of amorphous and opaque material from a traveling support of glass, by and in accordance with sound-vibrations; substantially as described.

5. The method of producing a transparent phonautogram, which consists in removing an undulatory line of even depth extending along a volute, of a deposit of amorphous and opaque material from a rotating disk of glass, by and in accordance with sound-vibrations; substantially as described.

6. The method of producing a layer of semi-fluid ink upon a phonautographic support, which consists in first applying a coat of oil, or other fat, upon the support, and then sublimating upon the oiled surface a thin layer of lampblack; substantially as described.

7. The method of producing a phonautogram, which consists in removing an undulatory line of non-resisting material from the under surface of a traveling plate, by and in accordance with sound-vibrations; substantially as described.

8. In a gramophone, the combination of a sound-receiving sonorous body; with a pivoted stylus controlled by and controlling the same, and a support adapted to carry a phonautogramic recording-surface, or a copy of such record in solid resisting material, traveling in the plane of vibration of the point of the stylus; substantially as described.

9. In a gramophone, the combination of a sonorous diaphragm and a pivoted stylus; with an elastic connection between the diaphragm and stylus, and an elastic reactionary dampening-support for the free arm of the stylus; substantially as described.

10. In a gramophone, the combination of a pivoted stylus, with an elastic connection between the diaphragm and the stylus; substantially as described.

11. In a gramophone, the combination of a vibratory diaphragm and a stylus controlled thereby and controlling the same; with a rubber tube clamped to the diaphragm and connecting the stylus with the latter, and a pivoted support for the stylus between its free end and its connection with the diaphragm; substantially as described.

12. In a gramophone, the combination of a vibratory diaphragm and a stylus elastically connected therewith; with a pivoted support for the stylus located between the free end of the same and its connection with the diaphragm; dampening-washers between the stylus and its pivotal support, and a reactionary dampening-support for the free arm of the stylus; substantially as described.

13. In a gramophone, the combination of a horizontal traveling support for the record-surface; with a vibratory diaphragm, and a recording-stylus bearing upon the under surface of the support; substantially as described.

14. In a gramophone, the combination of a

metallic record of spoken words or other sounds; with a backing of non-resonant material; substantially as described.

15. In a gramophone, the combination of a sound-receiving diaphragm, mounted in a suitable casing; with a tubular sound-conveying stem projecting from the casing, and an adjustable support for the tubular stem; the connection between the casing and tubular stem being such as to permit of the rotation of the casing relative to the stem for adjustment, substantially as described and for the purpose set forth.

16. A device for centering a spirally-extending record, of sounds upon a reproducing apparatus, consisting of a rotatable record-support having a central recess, a block fitting the said recess and having a perforation coincident with the mathematical center of rotation of the record-support, and means for holding the record upon the support, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

EMILE BERLINER.

Witnesses:
JACOB G. COHEN,
CHAS. W. HANDY.

[Fourth Edition.]

A.D. 1878, 24th APRIL. N° 1644.

Recording and Reproducing Sounds.

LETTERS PATENT to Thomas Alva Edison, of Menlo Park, in the State of New Jersey, United States of America, for the Invention of "IMPROVEMENT IN MEANS FOR RECORDING SOUNDS, AND IN REPRODUCING SUCH SOUNDS FROM SUCH RECORD."

PROVISIONAL SPECIFICATION left by the said Thomas Alva Edison at the Office of the Commissioners of Patents on the 24th April 1878.

THOMAS ALVA EDISON, of Menlo Park, in the State of New Jersey, United States of America. "IMPROVEMENT IN MEANS FOR RECORDING SOUNDS, AND IN REPRODUCING SUCH SOUNDS FROM SUCH RECORD."

My present improvements are for more fully developing and perfecting the device heretofore invented by me, and known as the "phonograph." By extensive experiment and research I have been enabled to obtain very perfect articulation and to produce a record in a convenient form for preservation.

The sound vibrations are made to move a point that by preference is a diamond or other very hard substance and of a peculiar shape. The sound vibrations in the atmosphere act upon a diaphragm or other body capable of motion, and the same moves the indenting point, and acts as a phonograph. The indented material is properly designated a phonogram, and it is preferably metallic. Sometimes tin-foil is used upon a grooved surface; sometimes a thin sheet or leaf of metal is placed upon a piece of paper having a surface of parafin or similar material. Sometimes the metallic surface is copper, and where a matrix has been made of steel or iron by electrotype deposit, or otherwise, upon the phonogram it may be hardened and used for impressing a sheet or roller of metal, and thereby the original phonogram can be reproduced indefinitely in metal that may be hardened and used for any reasonable length of time to utter the sentence, or words, or sounds phonetically.

The instrument or portion of the instrument that reproduces the sound from the

phonogram I term a "phonet." In order to facilitate production, use, and preservation of the phonograms I employ a ring or margin of thick paper or pasteboard, caused to adhere to the foil or sheet by resinous substance; this is used as a gauge in placing the sheet in the instrument or replacing the same in the phonet. I find that a disc revolved by gearing, and a weight or spring, and the movement regulated by a fan or governor, is a convenient device for presenting the surface to be indented to the phonograph, and the phonograph is on an arm that swings towards and from the centre of the disc, and is guided by grooves or other convenient mechanism.

The phonet device takes the place of the phonograph device when the sounds are to be reproduced.

When the sheet of material is wrapped around a cylinder its edges are passed down into a slit and held firmly. Either the cylinder may be moved endwise by a screw, or the phonograph or phonet devices be moved along the cylinder, and where the same sound is to be reproduced periodically, as calling out the hours of the day in a clock, or reproducing the sounds of animals in toys, the phonet is to be brought to the place of beginning automatically.

The phonographic devices employed by me are preferably a diaphragm of metal, against which the sound vibrations act. Sections of rubber tube applied to the surface act as dampers to prevent false vibrations; pieces of felt or similar yielding material may be used for the same purpose, and a small delicate hoop of spring metal between the diaphragm and the indenting point renders the phonogram more perfect than it would be if the diaphragm acted upon the point direct. A similar effect is produced by a disc upon the arm that carries the point, said disc being so close to the diaphragm that the atmosphere will produce the vibrations. It is often advantageous to use a case between the mouth of the speaker and the diaphragm to gather or hold the sound, and in some instances the head of the speaker should be inserted into this case up through a hole in the bottom. The mouth-piece is sometimes slotted or perforated, and has irregular edges to re-inforce the hissing sounds, and sometimes a membrane of rubber or gutta percha is fitted to the teeth, and forms a bag between the lips and the diaphragm.

The disc upon the arm that carries the point as aforesaid may be acted upon by a magnet, and the current through a helix from a diaphragm, or the motion of the arm and points may serve to set up a secondary current through such helix in consequence of the motion given by the phonogram to the point. The arm carrying the point in this latter case should be magnetised.

The phonogram may be produced by the direct action of air concentrated to the spot by a funnel terminating with a small hole, the end of the funnel being almost in contact with the moving surface to be indented.

When the foil is perforated instead of indented it can be rolled up in the form of a horn or cylinder, and revolved, and the articulation result from air blown from the end of a small tube passing through the perforations as they are presented in succession. Leverage is sometimes employed between the diaphragm and the phonogram, either to lessen or increase the motion of the phonographic action in recording, or of the phonetic action in speaking, and for recording quartette, trio, and other characters of singing, two, three, four, or more phonographic devices are employed upon one cylinder or plate, and the sounds will be reproduced by corresponding phonets; or where singing is conveyed through tubes to one diaphragm the phonographic record will be the combined tones, and the reproduction by the phonet will be complete and correct.

I find that an arm at right angles to a diaphragm, with a point resting upon the phonogram, will reproduce the tones by the weight and leverage of the arm moving the diaphragm. The phonogram may be in the form of a disc, a sheet, an endless belt, a cylinder, a roller, or a belt, or strip, and the marks are to be either in straight lines, spiral, zig-zag, or in any other convenient form, so long as the apparatus is adapted to bringing the same into contact with the phonet or speaking part of the apparatus, and the reproduction of the phonogram from a matrix or copy in relief

of an original phonogram may be made upon a belt, roller, cylinder, plate, or other convenient surface.

For amusement and instruction this phonograph is capable of extended use. For instance, a revolving cylinder containing phonograms of the letters of the alphabet and phonet keys, with corresponding letters on them, can be used in teaching the alphabet; and phonogram sentences, speeches, and other matters can be spoken by the phonet and repeated by the learner without the eyesight being called into use. For amusement or instruction the phonogram can be of a dog's bark, a rooster's crow, a bird's song, a horse's neigh, a lion's roar, and the like, and the phonogram can be used in a toy animal with a single phonet for the reproduction of the original sound.

This phonograph or speaking machine applied to a mask produces a semblance of vitality if the phonogram is made to operate upon moveable lips by levers, and in the production of such a phonogram a portion of the surface is to be indented by delicate levers and points, receiving motion from the lips during articulation; thereby a correct reproduction of the motion of the lips is obtained.

In connection with the phonet it is important to avoid the sound that usually results from the rubbing action of the phonogram upon the point. I am enabled to prevent this by an electric action between the point and the phonogram. In this case the phonogram should be of iron, and the point of steel and the parts magnetised so as to slightly repel each other; the point will follow the undulations and reproduce the sounds by the phonet. It is important that the point used in the phonet correspond in shape to that of the phonograph, but slightly smaller, so as to follow the bottom of the depressions without contact upon the sides. The diaphragm or other body employed in the phonet to receive motion from the phonogram is connected with a funnel of paper or other resonant substance that acts as a sounding board to render the phonet louder and more distinct.

Edison's Improvements in Recording and Reproducing Sounds.

SPECIFICATION in pursuance of the conditions of the Letters Patent filed by the said Thomas Alva Edison in the Great Seal Patent Office on the 22nd October 1878.

THOMAS ALVA EDISON, of Menlo Park, in the State of New Jersey, United States of America. "IMPROVEMENTS IN MEANS FOR RECORDING SOUNDS, AND IN REPRODUCING SUCH SOUNDS FROM SUCH RECORD."

This Invention consists in means for recording in permanent characters the sounds made by the human voice in speaking and singing, those made by musical instruments, birds, animals, or any sound whatever, and in means for reproducing those sounds at any desired time.

The sound vibrations act upon a diaphragm or other body capable of motion; this diaphragm is at the back of a chamber provided with an opening or mouth-piece, and to this diaphragm an indenting point is secured. This instrument I term a "phonograph." The phonograph is adjusted to position with its indenting point contiguous to a moving surface covered with a thin sheet of metal foil or other suitable material, or else the surface with the metal foil is stationary, and the phonograph movable. The surface upon which the metal foil is secured is by preference grooved spirally, and this indenting point indents the foil in the line of this groove as the diaphragm is moved back and forth by the sound vibrations; these indentations are a record of the sound waves, and form the characters for reproducing the sounds. This indented sheet I term a "phonogram." The instrument or portion of the instrument that reproduces the sound from the phonogram I term a "phonet." It is similar in construction to the phonograph, being provided with a diaphragm and point, but the mouth-piece is by preference funnel-shaped to render the sound loud and distinct. The sounds are reproduced by the phonet being adjusted to place so that the point of its diaphragm is at the beginning of the spiral line of indentations, and as the surface containing the indented foil is moved the diaphragm of the phonet is vibrated by the point passing from one indentation to the next, hence the diaphragm receives the same movement from the indentations as when making those indentations, consequently the sounds made by the phonet will be the same as those that operated upon the diaphragm of the phonograph.

In the Drawing Fig. 1 is a section of the phonograph and sectional elevation of the mechanism for presenting the surface to be indented; and Fig. 2 is a plan of the same.

The phonograph is made of the body portion *a*, diaphragm *b*, and indenting point *c*. The body portion *a* has a central opening forming the mouth-piece into which the person speaks, or through which opening the sound vibrations pass to act upon the diaphragm, and the diaphragm is secured at its edges to the body *a*, leaving a space between the body and diaphragm in order that the diaphragm may vibrate freely. The indenting point should be a diamond or other very hard substance. The diaphragm is made of a thin sheet of iron or other material, and it is preferable to place the indenting point upon a delicate spring arm e^2, and to employ a short piece of rubber tubing e^3 between the spring and diaphragm; this rubber acts as a damper to prevent false vibrations of the diaphragm. The phonograph is upon a lever arm *i* pivoted at 5 to the vertical stud 6, so that the phonograph may be raised or lowered vertically, or moved horizontally for a purpose hereafter explained.

It is now to be understood that if a person speaks with his mouth near the mouth-piece of the phonograph the sound vibrations will act upon the diaphragm, and vibrate it, and communicate to the indenting point a similar movement, and

that if a piece of metal foil or other material susceptible of being indented is placed beneath or behind the indenting point and caused to move regularly, or the indenting point moved over the material, that said material will be indented and form a perfect record of the sound vibrations. I will now describe the means for sustaining the sheet to be indented, and the mechanism for moving the same:—*d* is a disk or plate secured to and turning with the shaft *e*, and hinged to this disk is a ring frame *f*; this disk *d* has two spiral grooves 3, 4, in its surface. There are pins 2, 2, upon the surface of the disk, and holes at corresponding places in the ring frame; the sheet to be indented is of a size and shape to correspond with that of the disk *d* and frame *f*, and said sheet has holes in it corresponding to the position of the pins 2, 2, and these holes form register marks in placing or replacing the sheet upon the disk *d*, and after the sheet is so placed the ring frame *f* is brought down upon the sheet and holds it firmly in place. There may be a central opening in the indented sheet of a size slightly larger than the space occupied by the spiral 3, and the outer edges of the sheet are stiffened by a ring of thick paper or pasteboard caused to adhere by glue or other adhesive material. The surface of the disk *d* is made with two spiral grooves 3 and 4 as aforesaid; the groove 3 is a guide for a pin that is upon an arm *g* on the phonograph, and the groove 4 is for the indenting point *c*. As the disk and sheet are revolved the groove 3 causes the indenting point to occupy a position immediately over the line of the spiral 4, and the indentations will be made upon the sheet of foil in a line corresponding to that of the spiral 4, shown in Fig. 2. The indentations made in the foil are a complete record of the sound vibrations that acted upon the diaphragm *b*, and from this indented sheet, which I term a "phonogram," the sounds are reproduced. The phonograph is carried outwardly by the spiral 3, and in so doing the parts swing upon the vertical stud 6. By depressing the outer end of the lever *i* the phonograph is raised so that it can be swung aside from the disk *d* to allow of the ring frame *f* being thrown back and the indented sheet or "phonogram" removed from the disk. The shaft *e* is revolved by a weight or spring, and gearing at *h*, and the spring is wound up by moving the lever *k* back and forth, which acts upon a ratchet and pawl of ordinary construction; *l* is a lever provided at its outer end with an inclined groove, in which is a pin on the lever *m*, and the other end of this lever *m* is connected with the coupler m^1 by moving the lever *l* one way or the other, the shaft *e* will be connected to or disconnected from the gearing *h*, and hence the disk *d* stopped or started at pleasure without interfering with the motor. As it is necessary that the shaft *e* should be revolved with uniformity I provide a governor at *n* to prevent the apparatus revolving too rapidly; and this may be made as in Figs. 1, 3, & 4, in which there are metal blocks *o* at the ends of spring arms from a cross head on a shaft that is driven by the gearing *h*, said blocks swinging radially and acting against the interior of a stationary cylinder *p* if the speed becomes too great, thereby checking the speed by the friction of the blocks against the cylinder. These spring arms may be secured at one end to a prismatic block as shown in Fig. 5. It is preferable to cover the surface of the blocks *o* next the cylinder *p* with felt or similar material that will slide upon the interior surface of the cylinder *p*, but produce more or less friction, according to the centrifugal action.

The guide spiral 3 may be dispensed with, and either of the devices shown in Figs. 6, 7, 8, or 9 made use of. In Figs. 6 and 7 the shaft *e* projects above the surface of the disk *d*, and there is a tooth upon the shaft contiguous to a rack bar extending from the phonograph, hence each revolution of the shaft, the rack bar, and phonograph will be moved the space of one tooth, consequently the lines of indentations will be parallel and concentric to the shaft *e*, excepting at the places when the tooth acts to move the rack bar and phonograph outward or inward. In this case the spiral grooves are cut to correspond to the feed. In Fig. 8 a worm upon the shaft *e* acts upon a worm pinion to revolve the shaft e^1, and the worm at the other end of this shaft e^2 acts upon teeth around the base of the lever *i* on the stud 6. By this device the phonograph will be moved outward gradually, and the

line of indentations will be in a spiral corresponding to the continuous spiral groove in the plate *d*.

In Fig. 9 the shaft *e* is made with a fusee at p^1, and one end of a swinging arm connected to the phonograph takes against the same. The spirals of the fusee gradually move outward the phonograph, as the disk and shaft are revolved, and the line of indentions will be spirally the same as that made by the spiral 3.

In Fig. 10 the shaft *e* is provided with a screw pinion meshing with teeth upon a cam wheel 7. This gives the same movement to the phonograph as the spiral groove 3.

In Fig. 11 the guide groove 3 for the arm and pin *g* is upon a disk d^1 upon the shaft *e*, but the groove 3 occupies the same relative position upon the disk d^1 as the groove 4 upon the disk *d*, so that the phonograph is moved outwardly by the groove of the disk d^1, swinging both the arms *g* and *i* upon the vertical pivot 6.

Instead of the sheet of metal foil being upon the disk *d* it may be wrapped upon a cylinder *q*, as in Fig. 12. In this case the cylinder is upon a shaft e^1 revolved by the gearing at h^1, and upon said shaft there is a right and left hand screw at k^1, and there is a corresponding double spiral groove in the surface of the cylinder *q*. The phonograph is secured to a sliding shaft l^1, and said shaft is moved endwise back and forth by the screw k^1 acting upon an arm m^3 that is secured to the said shaft l^1. As the phonograph is moved in one direction the line of indentations is made spirally in the foil on the cylinder *q*, and when the arm m^2 reaches the end of the screw it will be moved in the other direction by the reverse screw thread, and the phonograph will make a second spiral line of indentations that will cross the first spiral line. This feature is especially available for a phonet where the surface of the cylinder *q* is formed of an electrotype or other copy of the phonogram, so that the words or sounds may be reproduced automatically and at intervals if desired. It is preferable to make use of a thin metal plate n^2, see Figs. 13 and 14, pivoted at one end and fitting within a longitudinal groove in the surface of the cylinder *q* for securing the edges of the metal foil and holding it securely upon said cylinder. The top of this plate n^2 is flush with the surface of the cylinder, and grooved to correspond with the grooves in the cylinder, so as not to interfere with the indenting point. A wire may replace this device, such wire being secured by arms at each end of the cylinder, and raised and lowered in and out of the groove by a cam or otherwise. I find that an interruption of one-eighth of an inch space where there is no recording is not detected by the ear.

The apparatus shown in Figs. 13 and 14 is similar to that shown in Fig. 12, except that the phonograph is stationary and the cylinder moves horizontally, and the shaft e^1 is only provided with a screw thread in one direction, hence the cylinder will have to be moved back by hand to bring it to place if desired to reproduce the sounds from the phonogram, or to position the phonograph if a new sheet of foil is to be indented after the first one has been removed. This is readily accomplished by raising the arm o^1 and its tooth from the screw k^1, which leaves the shaft e^1 and cylinder free to be moved back and forth. In Fig. 15 the phonograph is fitted to move horizontally instead of the cylinder *q*, as in Fig. 12, but the shaft e^1 is provided with a screw thread in one direction only, hence the phonograph has to be positioned by hand after the arm o^1 has been raised from the screw k^1. In Figs. 12 and 15 the phonograph can swing upon the shaft l^1 to raise the indenting point from the cylinder *q*, and allow for the removal or insertion of a sheet of foil, and there is a stop at 8 for adjusting the position of the phonograph when brought down to indent the foil.

In Figs. 13 and 14 the phonograph is upon an arm pivoted at 9, so that it can be swung horizontally away from the cylinder *q* for the purpose aforesaid, and the adjustable stop 8 is also provided.

Thus far I have described the "phonograph" or instrument upon which the sound vibrations act, and which instrument acts to indent the sheet of foil and produce the "phonogram" or record of such sound vibrations. Mechanism has also been described for presenting the sheet of foil to be indented by the phonograph.

I will now describe how the sounds are reproduced from the phonogram. If it is desired to reproduce the sounds from the phonogram in the same instrument in which the phonogram was produced it is only necessary that the indenting point *c* be made to traverse the line of indentations in the phonogram, and that a funnel-shaped mouth-piece, shown by dotted lines in Fig. 1, be added to the phonograph to aid in increasing the loudness and distinctness of the sound. The instrument in this form I term a "phonet."

In the instrument shown in Figs. 1, 2, 6, 7, 8, 9, 10, 11, 13, 14, and 15, the phonet requires to be positioned by hand, as before explained, in order that the point *c* may be placed at the beginning of the spiral line of indentations. As the point *c* passes from one indentation to the next, either by the foil being moved beneath said point, as in Figs. 1, 2, 6, 7, 8, 9, 10, 11, 13, and 14, or by the point moving over the foil, as in Figs. 12 and 15, the diaphragm *b* receives a movement corresponding to the depth of the indentations, and corresponding also with the same movement it received from the sound vibrations when making those indentations, hence air waves will be produced by the movement of the diaphragm that will make sounds by passing through the mouth-piece of the phonet that will be exactly the same as the sounds that acted upon the diaphragm of the phonograph.

The material upon which the record is made may be of metal foil, such as tin, iron, copper, lead, zinc, cadmium, or a foil made of composition of metals. Paper or other materials may be used, the same being coated with parafine or other hydrocarbons, waxes, gums, or lacs, and the sheet so prepared may itself be indented, or the material, say paper, may be made to pass through a bath of hot parafine and thence between scrapers. Thin metal foil is now placed on the material, and the sheet passed through rollers, which give it a beautiful smooth surface. The indentation can now be made in the foil, and the parafine or similar material, and the indenting point, does not become clogged with the parafine in consequence of the intervening foil. If the copper foil, or tin foil with copper surface is used, and a matrix of iron or steel made by electrotype deposit or otherwise upon the phonogram, such matrix may be hardened and used for impressing a sheet or roller of metal as hereafter mentioned; thereby the original phonogram can be reproduced indefinitely in metal that may be hardened and used for any reasonable length of time to utter the sentence or words or sounds phonetically.

I will now briefly describe some modifications in the construction and operation of the phonograph and phonet.

In Fig. 16 the indenting point *c* is upon a spring arm e^2, as in Figs. 1 and 2, but there are short sections of rubber tube e^8 at each side of the diaphragm *b* to dampen the diaphragm and prevent false vibrations. In Fig. 17, the rubber of the diaphragm acts against the outer end of the arm e^2 to increase the leverage and lessen the depth of indentations in the foil and allow of the record being made in less yielding material than tin foil. Fig. 18 shows a modification of the last-mentioned device, the pressure being applied to the arm e^2 between the indenting point and the support for the arm so as to increase the depth of the indentations. Fig. 19 shows the arm e^2 made as a lever with a spring. Fig. 20 shows the indenting point upon the center of a spring bar that is firmly held at each end; the bar is connected at its centre to the diaphragm *b* by a string or otherwise. Fig. 21 represents the diaphragm *b* as of concave form instead of flat. Fig. 22 shows the indenting point upon a spring secured to the diaphragm.

Fig. 23 shows a disk upon the spring e^2 of the indenting point; this disk is placed quite close to the diaphragm and is moved by the air as the diaphragm is vibrated, the disk being so close to the diaphragm that the two will vibrate together, as air cannot pass between or escape as rapidly as the vibrations take place.

Fig. 24 shows the diaphragm vibrated by electro-magnetism; in this case the diaphragm is to be of iron, and the power of the electro-magnet will be varied by a

rise and fall of electric current passing through the helix of the elecro-magnet; this rise and fall of electric tension is to be produced by the action of sound upon a diaphragm and connections in an electric circuit. Fig. 25 shows the method of vibrating the indenting spring and point by the direct action of an electro-magnet without the use of a diaphragm, the electric tension in the helix being varied by sound vibrations upon a diaphragm. Fig. 26 shows the spring arm e^2 connected to one end of a permanent magnet so as to highly magnetize the reproducing point; the foil should be of iron. When the point passes an indentation there will be less attraction than when passing no indentation; this will give good articulation free from the scraping noise of the point on the foil, for in this case it does not touch the foil, but is worked by magnetic attraction. Fig. 27 represents two instruments in connection with the cylinder q; in this case the phonet and the phonograph are separate. The phonograph records in the usual manner, but the phonet has its diaphragm set in motion by the rise and fall of the lever e^3. This reduces the scraping noise of the foil and acts by leverage, and a slight tension to move the diaphragm as the phonogram is moved beneath the point c. Fig. 28 shows an arrangement whereby four persons may speak simultaneously and have records made in separate parallel lines upon one cylinder, and the phonogram will reproduce the sounds the same as though it contained the record of but one voice. Fig. 29 shows a single phonograph adapted to receive the voices of three persons as in singing; the sounds made by the three voices are conveyed through flexible or other tubes to the diaphragm, and will be recorded in a single line of indentations. but when reproduced by the phonet the sounds uttered will correspond to the three voices.

In Fig. 30, the foil is sustained upon a hollow cylinder with a funnel-shaped end. The record is made upon the foil in the usual manner by the phonograph, excepting that holes are made entirely through the foil. A nozzle with a small opening is placed so that it will always be opposite the line of perforations as the cylinder is revolved. This nozzle is connected to a source of compressed air or other fluid, and every time a perforation comes opposite the nozzle, a puff of air passes into the cylinder and a sound is produced upon the principle of the siren. The nozzle may be placed on a spring to keep the end of the nozzle in contact with the line of perforations.

Fig. 31 shows the phonograph as made with a large chamber between the diaphragm and the mouth-piece; this is especially useful in collecting sound when the person speaking or the sound to be recorded is made several feet from the instrument. Fig. 32 shows a device whereby the indenting point may be dispensed with in the phonograph. The funnel forming the phonograph is made with a diaphragm at the larger end or mouth-piece, and a very small hole at the pointed end adjacent to the foil on the cylinder q; this foil should be very thin so that the indentations will be made by the direct action of the air waves as concentrated by the funnel without the interposition of the indenting point. Fig. 33 shows a phonet in which the phonogram or sound record has been made upon an endless belt; this is a convenient arrangement for toys, as the same may be made to imitate the bark of a dog or other noise made by an animal; and this belt may be of steel or other hard material that allows the same to be used for a long period of time.

Fig. 34 is a perspective view showing a double phonet, there being a spiral line of indentations on each side of the revolving disk d, one phonet coming into action as the other finishes; in this case the spirals should be in opposite directions, so that the disk continuing to revolve in the same direction moves one phonet from the center outwards, and then the other phonet is connected and moved back towards the center; this may be used as a toy.

Fig. 35 represents a phonet in which the phonogram containing a sentence, speech, words, or other sound record is upon a belt or strip wound upon a reel; this belt is drawn along gradually and wound upon the second roller by any suitable mechanism, and as the phonogram is thus moved it actuates the

phonet c, b. Fig. 36 shows a phonograph or phonet similar to that shown in Fig. 12, the cylinder q is revolved, but remains in one position, and the phonograph or phonet is movable back and forth over the cylinder. In this instance the arm m^2 is extended beyond the screw k^1, and passes beneath the inclined spring guide m^5, when the screw is carrying the arm and phonograph towards the right: as the arm m^2 passes from beneath the end of the guide m^5 it is no longer held to the screw, and the arm m^2 and phonet are lifted by the guide m^5 as the springs m^3 draws the shaft, phonograph, and arm, along to the place of beginning, at which place the arm m^2 drops off the end of the inclined guide m^5 into the thread of the screw, and as this revolves it carries the arm along beneath the guide m^5 as before. Fig. 37 represents the phonograph or phonet upon a pivoted arm, so that it may swing across or at right angles to the line of movement of the intended material or phonogram. In this case the line of indentations may be lengthwise of the belt, or across the same in the arc of a circle. Fig. 38 shows a phonograph similar to that shown in Fig. 31, except that the sound chamber is of a different shape.

Fig. 39 shows a mouth-piece with an orifice of soft rubber to fit the mouth or the lips of the person speaking, so that all sound waves will be confined to the chamber and diaphragm. Fig. 40 shows the mouth-piece of the phonograph made with cross slots with irregular edges. Fig. 41 shows the mouth-piece as perforated with numerous holes. Fig. 42 shows but one opening in the mouth-piece; the edges of this are irregular. These irregular edges reinforce the hissing sounds, and cause a more perfect phonogram to be produced. Fig. 43 represents a mouth-piece of mica with a central opening protected at its edges by a wooden ring. In Fig. 44 the diaphragm b is of wire gauze with a backing of paper connected to it by any suitable cement, and there is a ring of stiff paper at the edges of the gauze disk to strengthen it. Fig. 45 represents a diaphragm b of parchment or similar material stretched tightly within the frame b^6 by cords and screws. The cords may be of different lengths and tension, and respond to and reinforce certain sounds. Fig. 46 shows a mouth-piece for the phonet made in imitation of the human mouth. Fig. 47 represents the body portion of the phonograph or phonet made triangular, and the diaphragm is of corresponding shape. Fig. 48 represents three cylinders, each provided with a phonograph or phonet; this is useful in recording and reproducing three-part singing or music. Fig. 49 represents a phonet made as a tube, with flaring or trumpet-shaped ends, and with two diaphragms 15, 16, placed crosswise of the tube so as to form an air chamber. There is a third diaphragm b, which is vibrated by the movement of the reproducing point c, and said diaphragm gives motion to the air in the chamber, and vibrates the diaphragms 15, 16, which latter produce air waves, and the sounds issuing from the two trumpet-shaped ends will blend and increase the volume of sound. Fig. 50 represents a device whereby deep indentations are made in the metal foil. Two diaphragms are employed, the first (b^2) is vibrated by the sound vibrations, and controls a valve b^7 in a tube connected with a source of compressed air or other fluid; this valve b^7 allows more or less air to pass to the diaphragm b, according to the vibration of the diaphragm b^2, hence the diaphragm b will vibrate in harmony with the diaphragm b^2, but it will be acted upon by greater force, and consequently the indentations will be deeper in the foil than if the diaphragm b was acted upon simply by the sound vibrations of the voice. Figs. 51 and 52 represent a device that may be used with a phonet to increase the loudness of the sounds reproduced. The sound vibrations from the phonet are conducted by a tube shown by dotted lines in Fig. 51, to the diaphragm b^2 that controls a valve b^7 in a tube connected with a reservoir of air or other fluid under pressure, and the air as it escapes by the valve passes into the trumpet-shaped end of the tube, and produces sounds that are very loud and clear, and are a reproduction of the sounds resulting from the use of one of the phonets before described. This same apparatus may be used to reproduce with louder utterances a person's voice, the sound from the voice being used to vibrate the diaphragm b^2, and thereby regulate the air waves escaping from the valve b^7 into the trumpet. Fig. 53 shows the speaker's head within a box or case; in this instance nearly all

the sound vibrations act upon the diaphragm. Figs. 54 and 55 illustrate how the movements of the lips in speaking may be recorded and reproduced. In this instance, a lever applied to the diaphragm carries the indenting point *c*, Fig. 55, and the end of this lever is placed in the mouth of the speaker, and the movement of the lips regulates the indentations in the foil. A similar apparatus shown in Fig. 54 within a case is connected to the movable lips of a mask, so that these lips open and close as in articulation, at the same time that the sound vibrations are given by the phonogram to the phonet. Fig. 56 represents a toy phonet in which the phonogram strip 35 is secured at one end to a cylinder upon which it is wound. By pulling upon the strip it is unwound, and a rubber cord 37 is wound upon the shaft of the cylinder. When the hand is removed from the indented strip, the rubber cord rotates the shaft and winds up the phonograph upon the cylinder, and the sounds are reproduced in the phonet by the phonogram acting upon a point and diaphragm *a*. The movement of the shaft is regulated by the fan, worm, and pinion 38. In Fig. 57, the cylinder for moving the phonogram strip is shown as provided with pins that enter holes in the edges of the strip; this causes the strip to be fed along very regular. In Fig. 58, the cylinder with pins is shown as made with heads to act as guides for the strip. Fig. 59 shows a re-indenting device for amplifying or increasing the size of the indentations. There are two rollers, one of which a^4 travels faster than the other a^3, and there is a lever 40 pivoted at 41, and provided with a point *c* for each cylinder. One point follows the indentations in the cylinder a^4, and the other rests upon a^4, and as this travels the fastest, the indentations made therein will be longer and also deeper by the point being at the outer end of the lever. In Fig. 60, one roller 42 of the pair is made of hardened metal with the sound record in relief. This is obtained by electrotype or other process from an iron foil or other metal phonogram, and this roller is used to indent strips or sheets of foil or rollers to produce copies that can be used with the phonet. Fig. 61 represents a roller 42 of hardened metal with the record in relief, and arranged so as to knurl or indent the phonogram in a roller 43 of soft metal that is to be pressed against the roller 42 by a screw or other suitable means. The cylinder having a spiral groove in its surface may be made by placing the mould shown in Fig. 62 around a cylinder or shaft, and filling the space between the cylinder and mold with plaster of Paris or other suitable material. The mold is of metal with a screw or spiral rib projecting therefrom, and it is made in two parts and hinged so that it can easily be removed when the plaster of Paris is dry. For amusement or instruction, the phonograph is capable of extended use; for instance, a revolving cylinder, see Fig. 63, containing rows of indentations representing the letters of the alphabet, and provided with keys containing corresponding letters, can be used in teaching the alphabet, and sentences, speeches, and other matter can be spoken by the phonet, and repeated by the learner without the eyesight being called into use. Clocks may be provided with phonogram cylinders or wheels to call off the hours, to give alarms, &c. The phonogram may be upon a strip, sheet, belt, or roller, and it can be of a dog's bark, a rooster's crow, a bird's song, a horse's neigh, and these can be used in toy animals with a simple phonet for reproducing the sound. In copying phonograms, or making duplicates, an original phonogram may receive a deposit of copper or iron in a plating bath; and, if of iron, may be carbonized to convert it into steel and hardened, and then the same should be backed up with type metal, and use for impressing strips or pieces of metal.

A bed of gutta percha, or similar material, may be used to sustain the sheet metal while being pressed. Numerous copies of the original phonogram can thus be reproduced. A plaster cast can be used for producing a copy by pressure. The governor to regulate the speed of the instrument may be made of a pendulum weight 61, see Fig. 64, hung at the lower end of a rod that is provided with an universal joint at 62, and the upper end of the rod is moved around by a crank 63 that is revolved by the train of gearing. As the speed increases the weight will describe a circle of larger diameter, and thereby increase the resistance. The universal joint may be displaced by a spring wire, Fig. 65, that allows of the

movement. A magnet 64 upon the crank arm 63, Fig. 66, may be use to revolve the pendulum by attracting an armature at the upper end of the pendulum rod, and thereby avoid the friction resulting from the contact of the surfaces of the pendulum rod with the crank. In Fig. 67 the diaphragm *b* is represented as connected to pair of delicate piston valves within a tube 68 that has three ports; one 69, is connected to a reservoir of compressed air, the others, 70 and 71, are connected to a chamber 72 at opposite sides of a diaphragm, so as to vibrate the same in harmony with the diaphragm *b*, but there will be greater amplitude given to the same by the pressure of the air, and by a connection to the phonet diaphragm b^2 the sound produced will be greatly increased.

What I claim as my Invention is,—

First. The combination with the diaphragm and point of a flat receiving surface and means for revolving the receiving surface, and causing the point to follow a volute or spiral line, substantially as represented in Figs. 1, 2, 6, 7, 8, 9, 10, and 34.

Second. The combination with the revolving plate phonograph or phonet of a propelling weight or spring and a governor to regulate the speed, and ensure uniformity of movement, substantially as set forth.

Third. A revolving disk provided with a clamping frame to secure the foil or other material in combination with the swinging arm, diaphragm, and point, substantially as specified.

Fourth. In a phonograph or phonet, a spring introduced between the diaphragm and the point, substantially as set forth and shown in Figs. 16, 17, 18, 19, 22, and 26.

Fifth. In a phonograph or phonet, a rubber spring, or similar device, to dampen the vibration of the diaphragm, and prevent false vibrations, as set forth and shown in Figs. 16 and 21.

Sixth. The combination with the diaphragm in a phonograph or phonet apparatus of a lever to modify the relative action of the diaphragm and point, substantially as described, as shown in Figs. 17, 18, 27.

Seventh. The combination with the diaphragm and point of a permanent or electromagnet, substantially as described and represented in Figs. 24, 25, 26.

Eighth. The method of recording and reproducing two or more sounds or speeches simultaneously, substantially as described, and as illustrated by Figs. 28, 29, and 48.

Ninth. A phonet composed of a perforated sirene and a jet tube, substantially as described, and represented in Fig. 30.

Tenth. The mechanism for producing a phonogram, and employing the same in a phonet, substantially as described, and illustrated in Figs. 32, 33, 35, 36, and 37.

Eleventh. The combination with the phonograph, diaphragm, and point of a sound chamber, substantially as described, and illustrated in Figs. 31, 38, 39, and 53.

Twelfth. The diaphragm and mouth-pieces for a speaking phonograph, substantially as described, and as illustrated in Figs. 41, 42, 43, 44, 45, and 46.

Thirteenth. The combination with a diaphragm and its point of two diaphragms for the purposes, and substantially as shown in Figure 49.

Fourteenth. The combination with a diaphragm and valve actuated by sound vibrations a source of compressed fluid and a trumpet, as in Figs. 51, 52, or a phonograph as in Fig. 50, substantially as set forth.

Fifteenth. The combination of two diaphragms with a valve and a source of compressed fluid, as represented in Fig. 67, for increasing the volume of the voice or other sound, as set forth.

Sixteenth. The combination with two or more phonograms of phonet keys for selecting letters or utterances as described, and illustrated in Fig. 63.

Seventeenth. The means for duplicating or reproducing phonograms from an original phonogram, substantially as set forth.

Eighteenth. The combination with the phonograph or phonet of the revolving

crank and pendulum governor, substantially as described and shown in Figs. 64, 65, 66.

Nineteenth. The combination with the phonograph of a lever moved by the lips, and of a lever and phonet to move the lips of a mask, substantially as described, and illustrated by Figs. 53 and 54.

Twentieth. The combination with a phonogram of a clock movement or toy and a phonet for reproducing sounds for clocks or toys, substantially as set forth.

In witness whereof, I, the said Thomas Alva Edison, have hereunto set my hand and seal this 17 day of September, A.D. 1878.

THOMAS ALVA EDISON. (L.S.)

Witnesses,
CHAS. H. SMITH,
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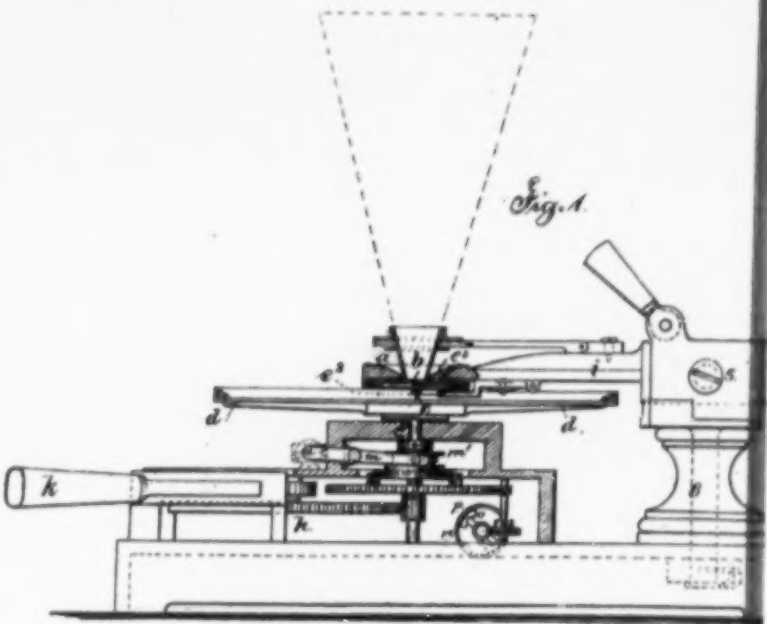
EDISON'S Specification.

(4th Edition)

Fig. 1



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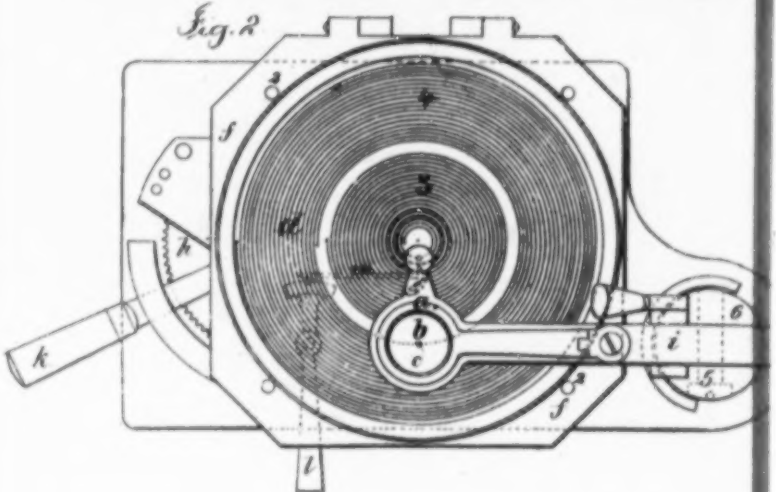

4 SHEETS]
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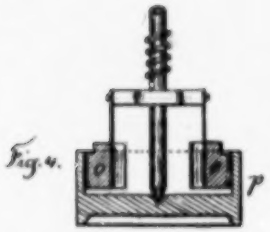

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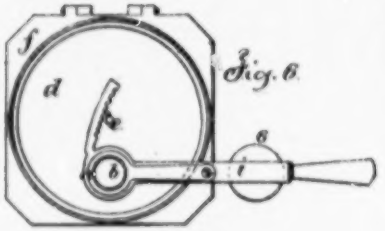

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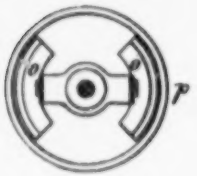

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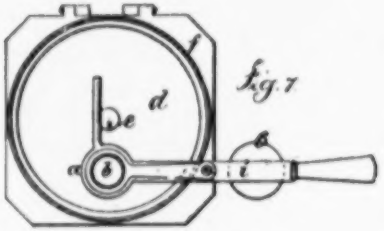

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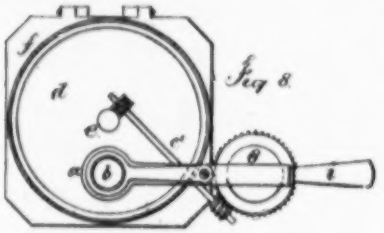

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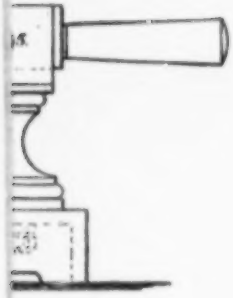

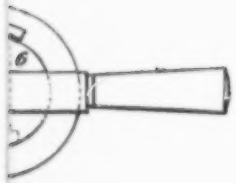

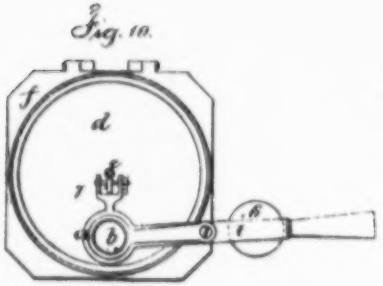

Fig. 10.

Fig. 9.

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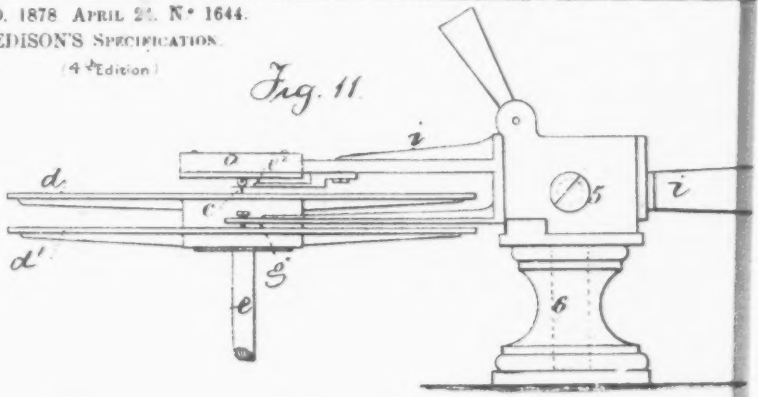
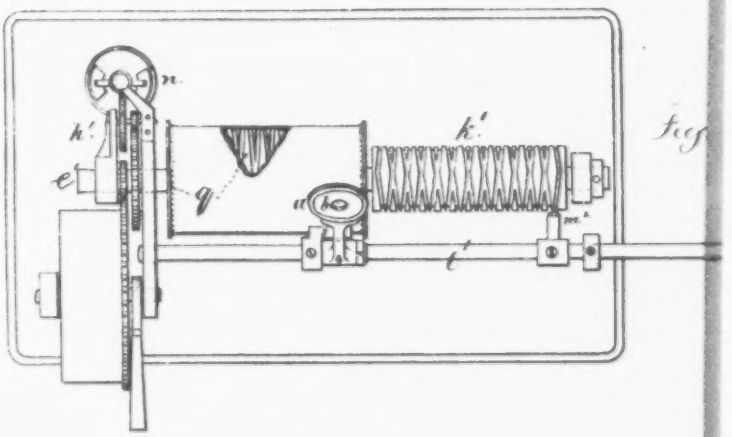
Fig. 11.





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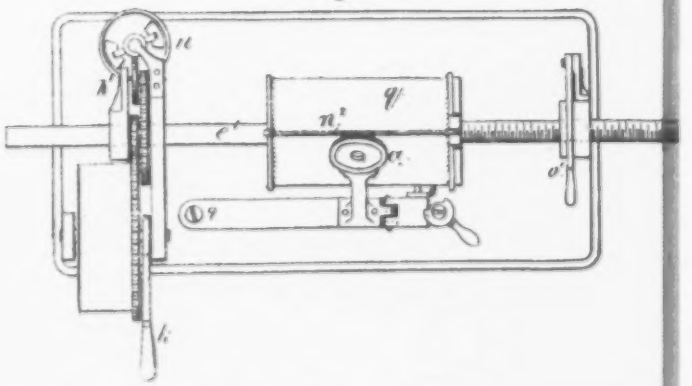

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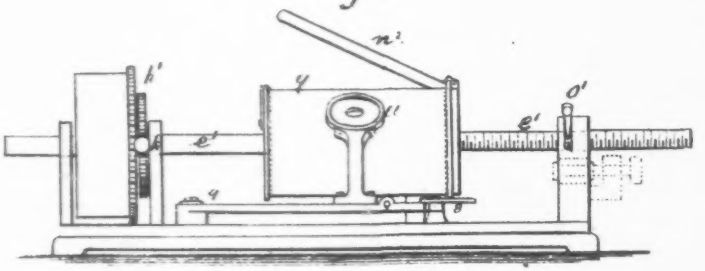

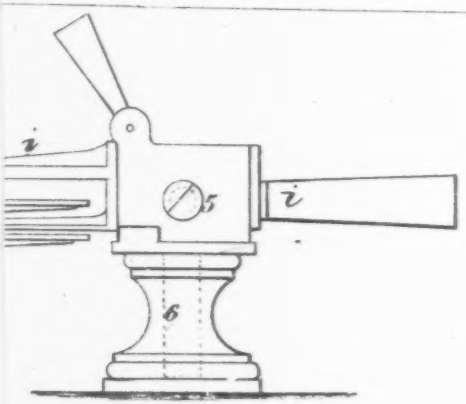

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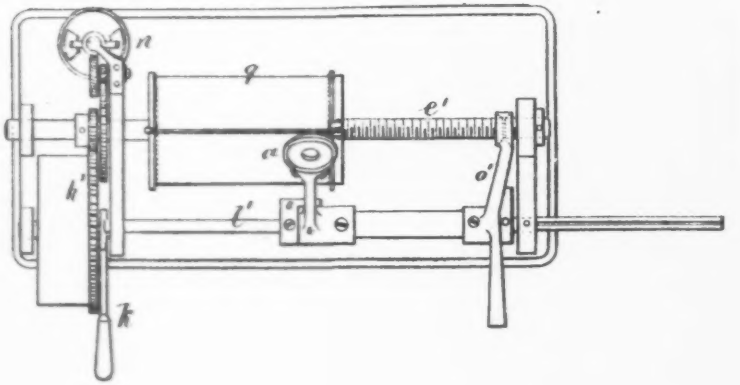


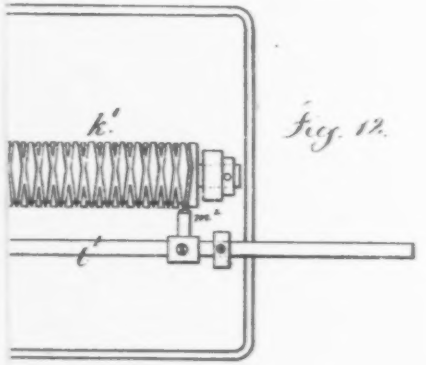
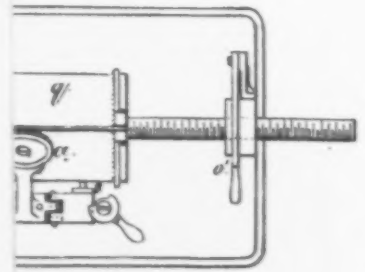


Fig. 12.

Fig. 13.



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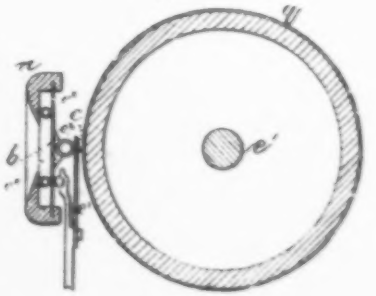

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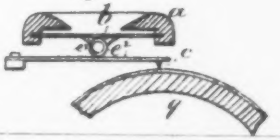

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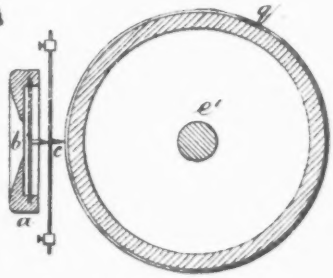
Fig. 20



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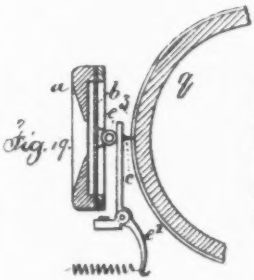

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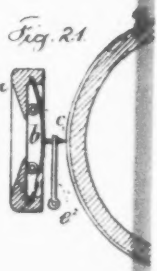

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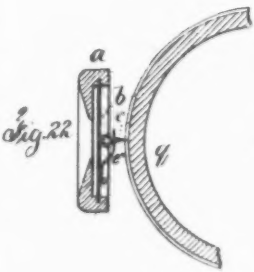

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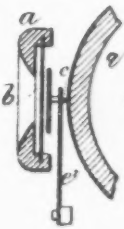

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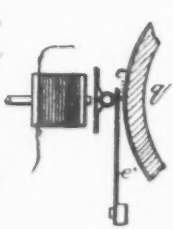

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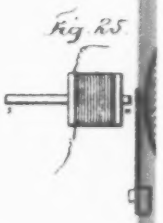

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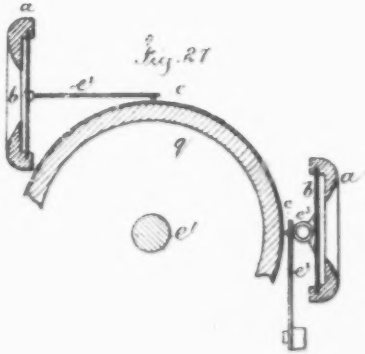
Fig. 27



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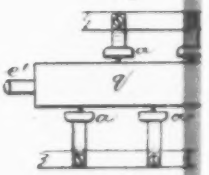

Fig. 29

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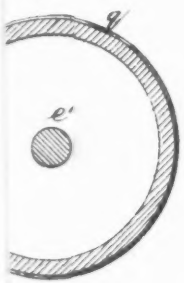
SHEET 3

Fig. 20



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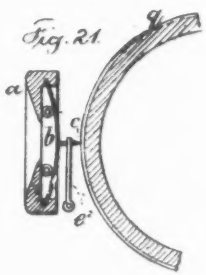

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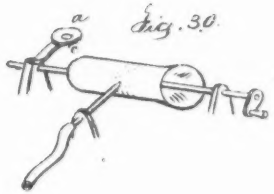

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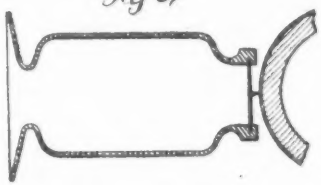
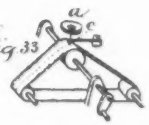


Fig. 32

Fig. 33



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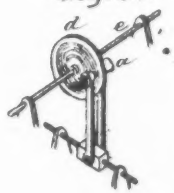

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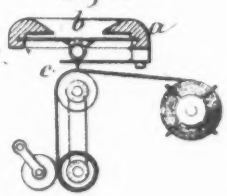

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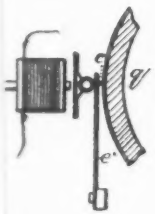

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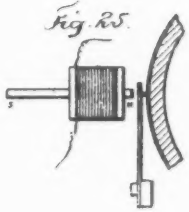

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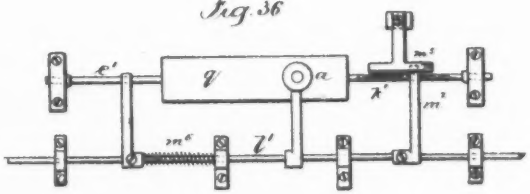

Fig. 37

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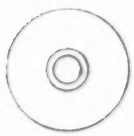

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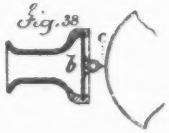


Fig. 39

Fig. 40

Fig 41.

Fig. 42

Fig 28.

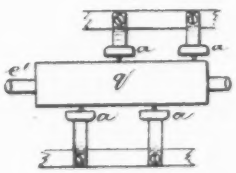
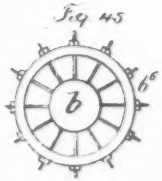


Fig. 29.

Fig 44

Fig 45



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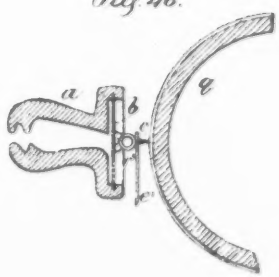

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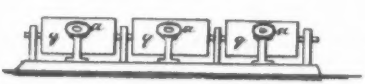
Fig. 48



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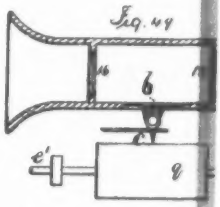

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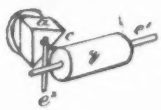

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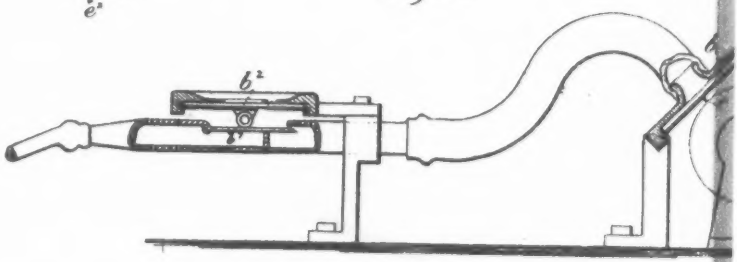

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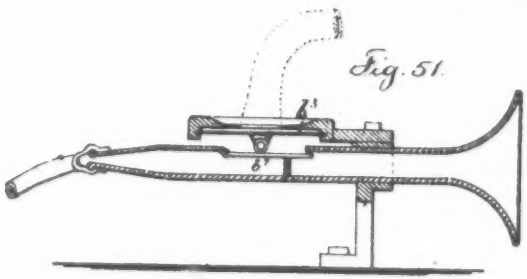

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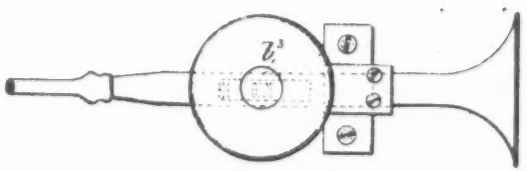

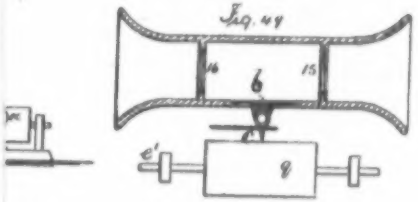
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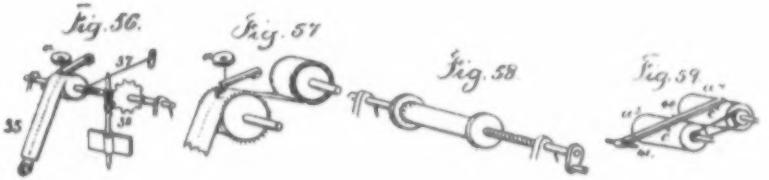
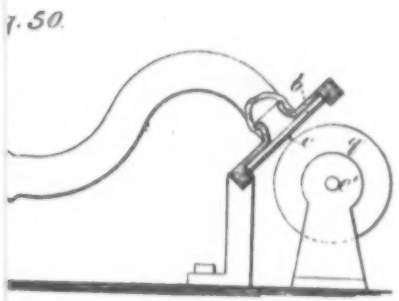


Fig. 56.
Fig. 57
Fig. 58
Fig. 59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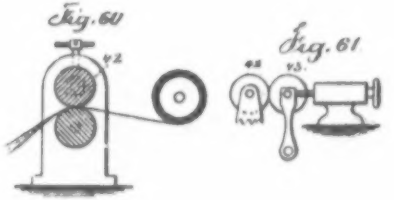
Fig. 60
Fig. 61

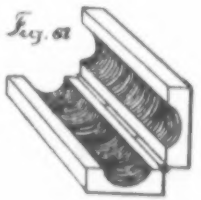
Fig. 62

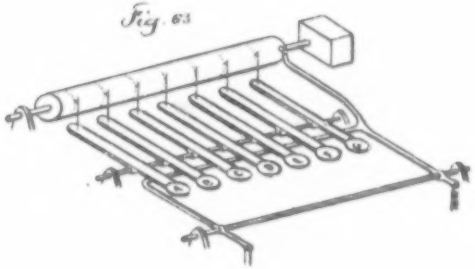
Fig. 63

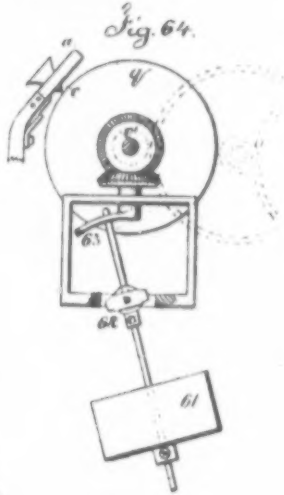
Fig. 64.

Fig. 51.

Fig. 53

Fig. 54.

Fig. 55

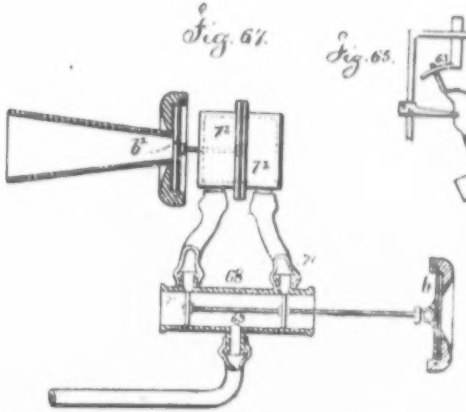
Fig. 67.

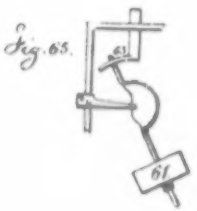
Fig. 65.

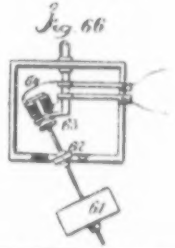
Fig. 66

This Specification was, upon the 7th day of October 1890, amended under Sections 18 to 21 of the Patents, Designs, and Trade Marks Act, 1883.

[*The Amendments are shown in crased and italic type.*]

N° 6027*

A.D. 1886

COMPLETE SPECIFICATION (AMENDED).

[*Communicated from abroad by The Volta Graphophone Company, of Alexandria, Virginia, in the United States of America.*]

Improvements in and Apparatus for Recording and Reproducing Speech and other Sounds

I, JAMES YATE JOHNSON of 47 Lincolns Inn Fields in the County of Middlesex Gentleman do hereby declare the nature of this Invention (which has been communicated to me from abroad by the Volta Graphophone Company of Alexandria Virginia in the United States of America and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement :—

This Invention relates to the formation in a solid substance of elevations and depressions or other inequalities corresponding more or less perfectly to the forms of sound vibrations and the reproduction by means of such inequalities of the sounds represented by them.

The invention consists first in the formation of the record or "Phonogram" as it has been called by means of a cutting style which is vibrated by the sound waves or sonorous vibration to be recorded. The vibrations may be impressed upon the style directly by the impact of the sound waves upon some device mechanically connected with or carried by the cutting style or its support or indirectly through the action of an electric current or other suitable vibratory medium.

Heretofore a large number of contrivances have been devised for converting electrical impulses into mechanical vibrations and they could of course be used for vibrating the cutting style otherwise they have no relation to this part of the present invention the essential new feature of which is the removal of material to form the record by a cutting, gouging or graving action of the vibrating style.

Heretofore the vibrating style has, as in Edison's well known Phonograph, simply ~~indented~~ *indented* the recording material. It has been proposed to cut the record in the edge of a strip of metal or other solid material by vibrating the strip in contact with the cutting edges of a rotary disc cutter but this proposal is essentially different from this Invention: the new mode being applicable to cutting the record upon all sorts of surfaces and not upon strips only. Under this part of the

Invention are included the vibratory cutting style as a new device in a sound recorder, and a combination of the same with other devices; also the cut or engraved record itself.

In this new or improved form of Record not only may a larger number of words or sounds be recorded in a given surface than has been practicable with the indented records heretofore in use but the recorded vibrations are also sharper and better defined—It is found that an indenting style smooths over the crests of the larger elevations and also rubs out some of the finer ones.

The Invention consists secondly in engraving or cutting the Records in a ~~wavy~~ *waxy* or amorphous and slightly cohesive substance. Preferably a compound of beeswax and paraffine (the latter in excess) is employed—This compound has no tendency to clog the style but is readily removed thereby in chips or shavings. This part of the Invention also ~~consists in~~ *includes* a recording material composed of a wax or waxy surface on a paper or pastboard foundation.

Heretofore it has been proposed to use soft paper saturated or coated with paraffine as the material for recording by the indenting method but its use does not appear to have been successful and an outer layer of tin foil was therefore employed to receive the indentations.

The Invention consists ~~thirdly~~ *also* in cutting or engraving the record in the form of a groove with sloping walls the sound waves being represented by elevations and depressions at the bottom of the groove or otherwise. The advantage of this form of record is that it forms an efficient guide to the reproducing style.

~~The invention consists fourthly in loosely mounting~~ The reproducing style *should be mounted* so that it can readily be guided by the record. This may be accomplished in different ways as for example by mounting the head of the reproducing instrument upon a joint which admits of a lateral movement, or the style may be so mounted as to be capable of a lateral movement independently of a diaphragm and other parts of the reproducer—By this latter arrangement the style can accommodate itself to the record without having to put in motion the larger mass of the head of the reproducer. It therefore responds more quickly—Both arrangements will be illustrated.

In order to allow the reproducing style the greatest freedom of side movement while insuring its return to a central position and without impairing to a serious extent its rigidity in other directions a comparatively broad and thin strip of spring metal placed on edge is connected with or forms part of the reproducing style—Such a strip is very flexible to side pressure but comparatively rigid to other pressures. The strip is fastened to the diaphragm or to the device upon which it is desired to impress the vibrations or it is otherwise hinged so that it can impress vibrations on said device, or said strip may be rigidly connected with the frame of the reproducer and the style be flexibly connected with the outer end of the strip.

Preferably the reproducing style is fastened to the end of a thin metal strip parallel with the width thereof so as to form a hammer like arrangement the style being the hammer head. It is a pin or wire several times as thick as the metal strip. The vibrations are transmitted through the hammer head the actual strip being attached to a spring or it may be otherwise hinged to the frame of the reproducer.

The reproducing style mounted as just explained, is specially adapted for use in connection with a Record in the form of a groove with sloping walls and this combination is specially claimed but it may also be usefully employed in connection with other forms of record.

~~The invention consists fifthly in~~ Reproducing *may be done* directly from the wax record. It is found that such a record has sufficient strength to withstand the rubbing action of the reproducing style so that a considerable number of reproductions can be obtained from it. The smoothness of the wax gives it a great advantage in this respect—It is believed that heretofore no one has reproduced sounds from a wax record by rubbing a style or reproducer over it.

The ~~Invention consists sixthly in transmitting the~~ vibrations of the reproducing style *may be transmitted* through a diaphragm, a *or* plate or other body of hard rubber. This material is found to give out purer sounds, the minute foreign vibrations being absorbed to a greater extent than with mica or metal, either of which and other materials also can under proper conditions be used with intelligible results.

The ~~Invention consists seventhly in cutting the~~ sound record *may be cut* in a fusible material the waxy compound before referred to for example and then ~~melting~~ the surface *be melted* slightly so as to remove any roughness left by the cutting style; these roughnesses are altogether outside of the sound vibrations and give rise in reproducing, to scraping noises which interfere with the intelligibility of the sounds reproduced. These scraping noises are greater with some other modes of reproducing which will form the subject of other Patents, than they are with a rubbing style, but even with the latter the additional smoothness given to the surface by the partial fusion has some advantage.

The invention consists ~~eighthly~~ *also* in a sound recorder having a cutting or graving style which is held by elastic or yielding pressure against the surface on which the record is to be made. The object is to enable the vibratory graver or cutting style to ride over instead of ploughing through any elevations on the recording surface—The depth to which the point of the cutting style is embedded in the Record affects the amplitude of the style's vibration By this Improvement the depth is kept uniform notwithstanding any slight unevenness of the recording surface.

The whole pressure of the Recorder may be borne by the style but there are advantages in combining with the recorder a rest which bears upon the recording surface or Tablet as it is called in this Specification and relieves the style of the greater part of the weight. The use of the rest enables a shallower groove to be cut effectively and also a lighter and more sensitive mounting of the style to be made The style projects beyond the rest. To regulate the depth of cut the rest is made adjustable.

In order to secure the most sensitive mounting for the recording style the latter is made from a short piece of wire and is attached directly to a diaphragm so as to be carried thereby; the means preferably employed being a screw thread on the style a nut of hard rubber engaging the same and a disk or washer of hard rubber between which and the nut the diaphragm is clamped.

The Invention consists ~~ninthly~~ *also* in having the recorder of whatever description or the producer or both rest against the tablet or recording material by gravity.

~~The Invention consists tenthly in combining~~ *There may be combined* with a sound recorder or reproducer of any suitable description, a tube or hollow standard on which the recorder or reproducer is mounted and through which the sound waves are conveyed. This ~~part of the Invention also consists in supporting this~~ hollow standard *may be supported* on a hinge and ~~having~~ *have* a sound conveying tube communicate with the interior thereof through the hinge—~~Also in the use of a~~ *There may also be used a* double ear piece for listening to the reproduced sounds and ~~of~~ a stop cock for modifying the loudness of these sounds. The double ear piece is somewhat similar to a Stethoscope —It consists of two elastic and flexible hollow branches provided each with a cup fastened to the branch by a ball and socket joint The cups fit over the ears and are held against the head by the elasticity of the branches the universal joint allowing each cup to adjust itself to the head of the user. The stop cock is placed in the sound conveying tube between the reproducer and the ear of the listener so that by partially closing the same more or less of the sounds can be cut off as desired. Where more than one person is listening each of the sound conveyors may have its own stop cock.

~~The Invention consists eleventhly in combining~~ *Combined* with the Recorder *there may be* a mouth piece so shaped as to include the nose of the user. It is found desirable to concentrate the sound waves as much as possible upon the recording instrument or style and if an ordinary mouth piece be used the sound reproduced in the Record is imperfect in the nasal elements and is somewhat like the speech of a person with a cold in his head. By the use of the improved mouthpiece this disagreeable quality of the reproduced sound is avoided The sound conveyor or concentrator

preferably used consists of a flowing mouthpiece of elliptical or oval section which covers the nose of the user and a tapering tube forming a continuation thereof which serves to amplify and reinforce the sound waves It is found that the longer this tube is within certain limits the greater its reinforcement of the sound waves but that a too great length gives a hollow effect as when words are spoken into an empty barrel.

For the sake of lightness it is preferable to make the mouthpiece and tube of thin sheets of hard rubber or of paper or the like material—Metal mouth pieces and tubes have also been used with good effect.

~~The Invention consists twelfthly in combining~~ With the reproducer *may be combined* a brush which bears upon the tablet and sweeps the record in advance of the reproducing style. Where the record is cut in wax the little shavings or chips are apt to cling to the record and have to be brushed off before reproducing—This can be done by hand, but it is not desirable to rely wholly upon hand brushing as too much care would have to be exercised to ensure that no particles adhere. The record is also liable to collect dust.

The Invention consists ~~thirteenthly~~ *also* in combining, with a recording and reproducing apparatus, in which the record is formed on the face of a disc in a volute or spiral by cutting or otherwise by any known or suitable means mechanism for giving to said disc an uniform surface speed under the recorder.

Heretofore when the Record was formed on the face of a disc the latter has been given an uniform rotation so that the same number of words were recorded in the outermost circle as in the smaller inner ones. By giving to the disc an uniform surface speed under the Recorder or by making the times of each rotation inversely proportional to the distance of the Recorder from the centre of the disc, the record of any given word or sound will be of the same length at whatever part of the disc it may be, and in this way it is possible considerably to increase the number of words or sounds on a given area.

~~The Invention consists fourteenthly in a~~ *The* recording tablet is *preferably* composed of a hollow Cylinder or tube of paper or other suitable material coated with wax or wax like composition, preferably a compound or mixture of beeswax and paraffin—The Record is cut in the coating. The advantages of this form of tablet are that it may be very light while having sufficient stiffness to retain its form and avoid the danger of cracking the coating, it is compact and adapted for transmission through the mails or otherwise, the recording surface is continuous and it can very readily be placed on and removed from the holder by which it is supported and rotated in recording and reproducing.

~~The Invention consists fifteenthly in~~ *A* new tablet holding mechanism.—~~The tablet holder~~ is made in the form of a Cylinder over which the tubular tablet can be forced or slipped and from which it can be removed as desired. This Cylinder may be solid but for lightness it is preferably made hollow—It is of metal or may be of other solid material. It is journalled in bearings and is provided with a Crank or other means for rotating the same.

In order to support the tablet holder in the most solid manner it is provided with a journal at each end and these journals and bearings are constructed to prevent end motion It is most detachable from its support at one or both ends in order to permit the placing and removal of the tablet—It will be understood that any ordinary or suitable means may be used for this purpose but it is preferred to use the means next to be described.

To facilitate the placing of the tablet on the holder and its removal therefrom and to avoid the removal of the tablet holder from the machine frame when this operation is performed a ball journal fitting in a cup or socket bearing, is employed at one end the other end being made detachable from the machine frame so that the holder can readily be tipped up and held in that position while placing or removing the tablet. The ball journal and socket bearing prevent end motion of the tablet holder.

With the object of further facilitating the placing and removal of the tablet the detachable end of the tablet holder is held down by means of a catch or other device which can readily be released and a spring is combined with the holder in such a way as to raise the detachable end thereof when the catch is released.

The journal at the detachable end of the Tablet holder instead of resting directly upon the machine frame or a bearing attached thereto, is provided with a box or sleeve which fits over the journal and forms the bearing therefore. This box or sleeve remains on the journal when it is detached and protects it from dirt as well as prevents the lubricant on the journal from soiling the hands of the person using the machine. The spring for raising the holder acts upon this box (a rod being interposed) and the journal is relieved of its pressure. Another advantage which the use of this box or sleeve gives is that if the two bearings in the machine frame are not precisely in line the box or sleeve may adjust itself properly without joining the journal. The very slight space which always intervenes when two separate pieces rest in contact will suffice to compensate for the very slight irregularity in alignement which a careful workman would leave.

~~The Invention consists sixteenthly in~~ *There is also provided* new or improved mechanism for supporting the recorder or reproducer and moving it across the face of the tablet (radially if a disc, or longitudinally if a Cylinder) so that by the combined translating motion of the Recorder or reproducer and the rotation of the tablet the recorder traces, and the Reproducer follows a spiral line on the tablet. This general form of instrument is known as well as that in which the tablet (disc or Cylinder) has a combined rotatory and translatory movement and *these* improvements ~~constituting the present Invention~~ are mostly applicable to both forms; but some of them ~~as those of this sixteenth part of the Invention~~ are limited to the form in which the recorder and reproducer have a translatory movement by means of a feed screw. To enable the Recorder and reproducer to be readily applied to and removed from the screw so that one screw can be used for both instruments, they are each provided with a divided or partial nut which engages the screw. To prevent the instrument from being disengaged accidentally a guard is or may be provided which can be slipped under the screw when the instrument is in place or be withdrawn when it is desired to remove it. Both the reproducer and the Recorder may have such a guard but practically it is more important for the Recorder.

Instead of having the recorder and reproducer mounted upon a slide moving in ways or guides and connected with a screw for moving the same, they are mounted on a carrier which is not only engaged by said screw but supported by the same so as to be moveable lengthwise of the screw and capable also of turning on it as on a journal. Thus devices heretofore considered necessary are dispensed with and a movement of the recorder or reproducer towards and away from the tablet is provided for.

The invention consists ~~seventeenthly~~ *also* in mechanism whereby the operation of the machine can be stopped temporarily. To enable this to be effected instantly, without stopping the main shaft of the machine, mechanism is provided for putting the feed screw out of action and at the same time automatically lifting the instrument clear of the record—Heretofore it has been necessary to stop the machine entirely. This is not desirable because in stopping and restarting the machine a difference in speed which appears on the record or in the sounds reproduced is almost certainly made, particularly where a fly wheel is used to give steadiness of motion.

This part of the Invention also comprises means whereby a word or sentence or a paragraph can readily be repeated when desired. To effect this a reversing as well as a stop mechanism is employed so that by bringing said mechanism into action the motion of the reproducer is reversed and the instrument is brought back to the beginning of the part to be repeated being meanwhile lifted clear of the record which continues or may continue to revolve in the same direction at an uniform speed.

~~The invention further comprises certain special constructions combinations and arrangements of parts as hereinafter set forth.~~

Having now explained the principle of the Invention, the manner in which the same is or may be applied will now be explained with reference to the accompanying drawings which make part of this Specification.

Fig. 1 is a plan view of an apparatus constructed in accordance with the Invention arranged for recording sound upon the face of a disc. Figures 2 and 3 respectively a front elevation and cross section of the same—Figure 4 a view in section and elevation of the recorder. Figures 5 and 6 views on an enlarged scale of the graver or cutting style Figures 7 and 8 views in elevation and section respectively of the Reproducer Figures 9 and 10 similar views of another form of reproducer and Figure 11 an elevation of the sound conveying tube for use with the reproducer.

Figures 12—17 represent a modified form of the disc apparatus Figure 12 being a back view partly in section Figure 13 a plan partly in section Figure 14 an edge view partly in section. Figures 15 and 16 views in elevation and section of the Recorder and Figure 17 an edge view of a friction clamp making part of the apparatus. Figures 18 and 19 are plan and longitudinal sections respectively of a form of apparatus also constructed in accordance with the invention in which the Record is made on a strip and figure 20 a plan partly in section of the reproducer for use with such apparatus. Figure 21 is a view of a Recorder in which the style is operated electrically.

Figure 22 is a plan view of a machine or apparatus constructed in accordance with the invention or in which the record is made on a Cylinder. In this view the reproducer is shewn in place and the Recorder omitted. Figure 23 is a vertical cross section of the same apparatus in elevation looking to the right in Figure 22. Figure 24 a section in the plane of Figure 23 but in elevation looking to the left, the Recorder being shewn in place and its mouth piece being broken away. Figure 25 a view similar to Figure 24 but with the reproducer in place instead of the recorder. Figure 26 a partial vertical longitudinal section on line x x of Figure 23—Figure 27 an elevation partly in section of a part of the left end of the machine.

Figure 28 is an elevation partly in section of the Recorder its carrier and sound concentrator—Figure 29 a top view (on a reduced scale) of the sound concentrator of the Recorder—Figure 30 a central section of the Recorder in a plane at right angles to those of Figures 24 and 28 shewing the base or carrier in elevation and figure 31 a section through the base or carrier of the recorder.

Figure 32 is a central vertical section of the reproducer its carrier and certain accessory parts. Figure 33 a face view of the Reproducer. Figure 34 a perspective detail view. Figure 35 a section through the base or carrier of the instrument. Figure 36 a section illustrating a modified form of style. Figure 37, an elevation partly in section (on a reduced scale) of a listening device with double ear pieces and figure 38 a section illustrating another modification of the reproducer.

Referring to figures 1—11. A is the base or bed of the apparatus and B an upright frame which carries the mechanism for supporting and moving the tablet F (shewn as a disc) on which the record is to be, or has been, formed—In the slide C moveable in ways of the frame B. is journalled an arbor D on which are fixed a metal disc E at one end and a bevel gear 1 at the other. The arbor projects beyond the metal disc E so as to form a support for the recording tablet F which is retained thereon by the nut 2 and washer 3. The metal disc E performs the double function of a friction wheel and of a backing to the recording tablet F.

The bevel gear 1 engages a similar gear 4 on the end of the screw 5 which is journalled in a bearing in the slide C and is tapped through a stationary lug 6 on the frame B—As the arbor D is revolved the screw is turned also, and in consequence of its engagement with the lug 6 it moves the slide C lengthwise of the frame B. The rotation is communicated to this arbour from the shaft 7 journalled in bearings of the frame B and provided at one end with a fly wheel 8

and crank handle 9 and at the other end with a friction pinion G. This pinion is formed as shewn of rubber discs clamped together between metal washers—It bears against the back of metal disc E and communicates motion to : —As the slide C is moved by the action of the screw 5 the metal disc E is carried past the friction pinion so that it touches the metal disc in a spiral line and serves to give an uniform surface speed to each part of the disc as it in turn comes opposite said pinion.

The Recorder H is placed on the opposite side of the metal disc E preferably as shewn with the point of the graver or cutting style 11 directly opposite the point where the pinion G touches the disc E The said pinion thus acts as a support to the disc against the action of the cutting or recording style—The latter is preferably formed of a round wire by turning the end conical and rounding the extremity and then grinding off one end to the axis of the wire.

This leaves sharp cutting edges on both sides of the tapering point. These edges remove the material in chips or shavings like a plane or turning tool. It is not essential to give this form to the style—Any form which will remove the material and not simply displace it will answer.

The style is set in one end of a block 12 provided on the opposite end with a cup 13 (see figure 4) and secured in the cross-piece 14 by the nut 15. The cross piece 14 is fastened to a ring 16 into which a back plate 17 is secured. These parts except the steel style are preferably of hard rubber although they could be made of other material, of brass for example.

A sound conveying tube 18 is screwed into the back plate 17 the end being just behind the cup 13. A diaphragm 105 of any suitable material whose edges are clamped between the ring 16 and back plate 17 is placed behind the cup 13 which is pressed against said diaphragm by the elasticity of cross piece 14.

The tube 18 forms part of a hollow standard upon which the recorder is mounted. The lower part 19 of this standard is hinged in the bracket 20 as clearly shewn in figure 2, so that it can be rocked to bring the Recorder into or put it out of action.

On the tube or standard 19 is a ring-weight Z which is retained in position by a set screw 127. It therefore can be adjusted up or down in order to increase or diminish the pressure of the style 11 against the tablet F. The use of this weight is desirable but not necessary.

The tube 21 communicates with the interior of the hollow standard through the hinge and does not therefore interfere with its freedom of motion. This tube 21 can be fixed in the bracket or can be allowed to turn as may be preferred.

The mouth piece I is shaped to fit the face of the user and is provided with a notch 22 to receive the nose. It is attached to the tube 23 which at its lower end fits snugly in the tube 21 and communicates through the series of tubes 23, 21, 19 and 18 with the space inside and back of the cup 13.

In operation the recorder rests by its own weight assisted by the pressure of weight Z, or by its own weight alone if preferred, against the recording tablet F, said weight causing the style to engrave itself to the proper extent in the recording material—The sonorous vibrations impressed upon the style are so rapid as well as so minute that the record is made as perfectly as if the Recorder were held positively, while at the same, time the recorder can be moved bodily to conform to the unevenness of the surface of the tablet and thus keep uniform the depth at which the style operates.

The tablet F consists of a paper or paste board foundation 24 with a coating 25 of wax—A composition excellently adapted to the purpose and according to experience the best, consists of one part by weight of white beeswax and two parts of Paraffine. The two bodies are melted together and if not perfectly free from dirt and grit should be filtered. A filtration through Cotton wool will answer. The coating is or may be about $\frac{1}{20}^{th}$ of an inch in thickness (the paper being $\frac{1}{10}^{th}$ of an inch more or less) and can be made by flowing the melted composition over the paper disc or foundation. The surface is preferably turned off flat on a lathe.

In order to place the tablet in the machine the recorder H is turned back out of the way. When the tablet has been secured in place the recorder is turned forward into the position shown the style resting against and slightly penetrating the wax coating. A penetration of $\frac{1}{100}$ of an inch has been found very effective the style being formed of N°. 16 wire shaped at the cutting end as in figures 5 and 6.

Upon turning the fly wheel 8 the disc E and tablet F will be turned and the style 11 will cut or engrave a spiral line in the wax coating of the tablet—If one talks into the mouth piece I the style will be thrown into vibrations corresponding to the spoken words and the engraved line will be of varying character the inequalities or variations from uniformity representing the forms of the sound waves.

The reproducer K shewn in figures 7 and 8 for reproducing from the engraved tablet or from other suitable record, the sounds which formed said records has a reproducing style 26 formed of a narrow metal strip bent near the end as shewn in Figure 8 and pointed as shewn in Figure 7. This style is held by cementing rivetting or otherwise, between the strip 27 and the circular plate 28 both preferably of hard rubber. The strip 27 is fastened at the bottom to an offset on the block 29 in which a passage is formed for the sound waves. This passage terminates just behind the plate 28. There is a fixed disc 30 of the same size as the moveable plate 28—It is cemented or otherwise fastened on the face of the block and is perforated at the centre in order not to obstruct the opening therein. The plate 28 is close to but not in contact with the disc. The tube 31 fixed at the upper end to the block 29 is joined at the lower end to the tube 33 by a section of soft flexible vulcanised rubber tubing 32. For use the tube 33 is slipped into the tube 19 in the manner shewn for the tube 18 of the Recorder.

The reproducer K when so placed is mounted upon a hollow standard composed of the tubes or tubing 31, 32, 33, and 19, and in consequence of the flexibility of the Rubber tubing 32 it is free to follow the Record. No special care is necessary to insure its adjustment for if the reproducer K be allowed to rest against the record with the style upon the engraved line, the style will of itself gravitate to the bottom of the groove.

There exists always a liability to disarrangement in some part of the machine either in the Recorder or the support therefor or the recording tablet or its support; or if there be no disarrangement it would be difficult to insure that the reproducing style should touch the record precisely at the proper point if the reproducer be held rigidly. Difficulties on these accounts are avoided by the loose or flexible mounting of the reproducer, the style automatically adjusting itself to the proper place on the Record. It will be seen that the reproducer is mounted on an universal joint so that it can move in any direction. The movement parallel with the face of the tablet would however by itself allow the style to follow and adjust itself to the record to a useful extent.

In operation the reproducer K is placed against the record and on turning the wheel 8 in the same direction and at about the same speed that it was turned in recording, the record will move the style 26 and plate 28 so as to throw the air in the hollow standard into vibrations and produce sound waves similar to those which originally acted upon the recording style to make the record.

The reproduced sounds are audible by placing the ear in proximity to the mouth piece I but it is preferred to withdraw said mouth piece and to connect the flexible tube 34 (see figure 11) with the tube 21 and listen at the ear piece 35.

After the record has been cut it will of course be understood that the machine is turned back to the starting point for reproducing.

The surface of the cut record can be rendered more smooth by removing the engraved tablet from the machine and exposing the surface to heat as for example by rotating the tablet face downward over an Alcohol lamp until the surface begins to glisten. Of course a too long exposure would destroy the Record—It is the merest surface action that is required The record can be used for reproducing without submitting to this operation and without removing it from the machine.

It may however be removed and at any time thereafter replaced on the same or a similar machine and be made to reproduce the original sounds.

The Reproducer K¹ shewn in figures 9 and 10 has the style 26 attached to the outer of two light plates 36 and 37 which are attached to a diaphragm 38 of thin sheet rubber clamped at the edges between the ring 39 and the border of the back plate 40. The tube 31 is fastened in the back plate.

It will be observed that in both forms of reproducer the style 26 projects beyond the edge or end of the instrument so that the position of its point on the record can be easily seen.

Referring now to figures 12—17 A is the bed B and upright frame D an arbour, E a metal disc, F the tablet and G a friction pinion as in Figures 1—11. The nut 2 and washer 3, the shaft 7 wheel 8 and crank 9 and the paper disc 24 and wax coating 25 are identical with the parts similarly numbered in Figures 1, 2 and 3.

The arbor D instead of being journalled in a slide is carried by an arm L which is supported by and is fixed on the short shaft 50. This shaft is supported on centres 51 and 52 so that the arm L can be rocked. The worm wheel 53, loosely mounted on the shaft 50 is held stationary by the clamp M the jaws 54 fitting on either side of the wheel and being pressed against it by the thumb screw 55.

The arbor D carries a screw wheel 56 which engages the worm pinion 57 at the upper end of shaft 58. The screw 59 at the lower end of the shaft engages the worm wheel 53. This shaft 58 and the gears 57 and 59 carried thereby prevent the arm L being turned independently of the worm wheel 53 except as the said shaft is rotated. As the arbor D disc E and tablet F are rotated the screw wheel 56 turns the shaft 58 and consequently the worm wheel 53 being held stationary by the clamp M the arm L is swung gradually to one side so that the recorder engraves a spiral line on the wax face of the tablet.

When the record has been cut it is only necessary in order to restore the tablet to the starting point for reproducing, to throw back the recorder and to loosen clamp M when arm L can be moved at once to the proper position.

A recorder constructed and mounted precisely as in figures 1, 2, 3, and 4 could be used in this machine but as shewn the recording instrument H¹ is modified to some extent. The cutting style 11 (which is the same as that of Figures 4—6) is set into a block 60 carried by a metal strip 61. This is fastened to a block 62 at the lower end of a back piece 63 which is attached to the upper end of the tube 64 which forms the hollow standard for the recorder and which is mounted on the bracket 65 so as to be capable of being turned to put the record into or out of action. The sound conveying tube 66 corresponding to tube 21 of Figures 1 and 2 communicates through the hinge with the interior of the tube 64.

In front of the opening at the upper end of tube 64 is stretched a diaphragm 67 of thin sheet metal or it may be of other material its edges being clamped between the ring 68 and back piece 63, soft rubber rings 69 and 70 being interposed one on each side of the diaphragm—On the opposite side of the diaphragm 67 from the tube 64 a light plate 71 of metal cupped in the centre is held against the diaphragm by the pressure of the strip 61 a projection on the back of said strip bearing against the said plate 71.

In this machine the reproducer K instead of being mounted on the same bracket as the recorder when the latter has been removed, is carried by a separate bracket 72 the tube 33 being hinged thereto so that the recorder and reproducer remain or may remain always attached to the machine, it only being necessary to turn one or the other into position as may be required.

Referring to figures 18—20, A is the base or bed B an upright frame 7 the driving shaft 8 the fly wheel 9 the operating crank handle and G the friction pinion as in figures 1 and 2. The arbor P is supported in an upright position in bearings of the frame A. B. and is revolved by the friction pinion G engaging the friction disc Q.

The record is made on a wax coated strip of paper R which is passed around the periphery of the disc S in the groove formed therein—As the strip passes in front of the recorder or reproducer it is wound off one reel say the reel T and upon the other reel U. The strip can be wound back upon the reel T when desired. Each reel rests by its own weight upon a platform or flange 75 at the upper end of a hollow shaft 76 which turns upon a stand 77 fastened at the base to a bed B. A pin 78 passes through the centre of the reel and forms a journal for it to turn upon. A nut 79 holds the reel on and may be used to bind it with more or less tension. On each shaft 76 is a belt pulley 80 and 81 respectively driven by a crossed belt 82 or 83 from a pulley 84 or 85 on the Arbor P. These pulleys 84 and 85 are loose upon the arbor but are provided each with a clutch 86 and 87 so placed (see figure 18) that when the arbor is turned to the left the clutch 87 engages the hub 89 on the arbor and the pulley 85 is turned therewith while when turned to the right the clutch 86 engages the hub 88.

Each shaft 76 has a stop clutch 90 and 91 respectively, which holds it stationary when the strip is being wound on the other reel. Thus when the arbor P is turned to the left the reel U is revolved in the direction indicated by the arrow and the sleeve supporting reel T is held stationary. The strip is thus stretched at all times, the degree of tension depending upon the friction between the reels and their supporting flanges 75.

The recorder H^{11} is carried by a cross piece 92 supported by posts 93. The style 11 is carried by a cross piece 94 to which it is attached by means of the cup 95 of hard rubber which forms a nut on the screw threaded shank of the style and said cup rests against a mica diaphragm 96 whose edges are clamped between the screw ring 97 and the back plate 98. The tube 18 screwed into the back plate is fastened by soldering or otherwise to the cross piece 92. The tube 23 of the mouth piece I fits into said tube 18. The ends of the cross piece 92 are slotted to fit around the screws at the top of posts 93 and rest upon nuts 99 and are clamped by nuts 100. By means of these nuts the vertical position of the recorder can be adjusted. After one line has been engraved on the strip the recorder can be adjusted to engrave as many additional lines parallel thereto as the strip will receive. The slots in the cross piece 92 allow the recorder to be moved towards and away from the strip so as to regulate the depth of the engraved line. To ensure a greater nicety of adjustment, screws 101 are tapped through the metal at the closed ends of the slots and bear at the point against the supporting screws. The Reproducer K^1 (Figure 20) is similar to that shewn in Figures 9 and 10 except that the style 26 is so placed that the point is at the centre instead of projecting beyond the edge of the instrument. Its position on the Record is therefore not so readily seen but with the form of machine shewn in these figures this is less important. The same may be said of the loose mounting of the reproducer although in point of fact the thin rubber diaphragm 38 gives a certain lateral play to the style. The tube 31 is rigidly fastened to a cross piece 102 identical with the cross piece 92 and with said tube 31 the hearing tube 34 and ear piece 35 are connected.

The paper strip can be easily coated with the beeswax and paraffin compound by running the same through a body of melted composition and scraping one side leaving what adheres to the other to harden thereon.

In figure 21 an arrangement for operating the recorder by electro magnetism is shewn The magnet 107 is mounted on a bar 108 journalled in bearings in standards 109. It is provided with a bobbin 106 of wire surrounding the pole piece which bobbin is included in a circuit over which electrical undulations are caused to pass by any suitable transmitting instrument; for example such as commonly employed on Telephone lines.

In front of the pole piece or core of the bobbin is a diaphragm 105 of magnetic material whose edges are clamped between the ring 16 and back plate 17. The cup 13 should always be in contact with diaphragm 105 and be pressed against it

by the spring of piece 14. This cup as well as the style 11 block 12 nut 15 and cross piece 14 is the same as in the Recorder H of figures 1—4.

Referring to figures 22—28 the frame of the machine as therein shewn consists of two upright side pieces 300 and 301 connected by tie rods 302 and 303 and the tube 304 which serves as a tie rod. The tablet holder 305 in the form of an elongated metal Cylinder is journalled in bearings at the top of the side pieces. The right journal 306 is ball shaped and rests in a socket (see figure 26) which permits the tablet holder to be tilted up, as indicated in dotted lines as well as to be revolved, while endwise motion is effectually prevented. The fly wheel 317 provided with a crank handle is mounted on a prolongation of the journal and serves to revolve the tablet holder. The left journal 307 which is or may be Cylindrical fits and revolves within a box 308, which is held in place on the journal by a screw 309 in the end thereof. The box 308 is confined between a seat on the side piece 301 and the hinged cap 310 which is held down by the spring Catch 311 (see Figure 27) fastened at the bottom in the plug 312 which is adjustably retained in position by the set screw 313. The catch can be released at will by a push pin 314. Below the journal 307 is a follower 315 fitting into and moveable in a hole in side piece 301 acted upon by the spiral compression spring 316 placed below it in the hole. The box 308 rests upon the top of the follower and relieves the journal of all pressure from the spring 316 when the cap 310 is held down by the catch 311. This pressure prevents the box turning. On releasing the catch 311 the spring 316 expands and throws up the journal 307 and the cap 310 as shewn in Figure 27. The cap can then be turned back and the tablet holder be tipped up and held in an inclined position by a hand on the fly wheel 317. The tablet consists of an elongated hollow Cylinder or tube 318 of paper or pasteboard (say one fortieth of an inch in thickness) coated with a layer about one thirtieth of an inch in thickness of a compound of one part by weight of white beeswax and two parts of paraffin. The beeswax and paraffin should be melted and stirred together and then filtered unless they are entirely free from sticks dirt and other foreign particles. The coating is or may be applied by stopping the ends of the cylinder partly immersing it in a bath of the melted composition and turning it therein one or more times, removing it and allowing the material to harden keeping it in motion meanwhile to prevent running then immersing and rotating it again and allowing the adherent layer to harden and so continuing until a coating of rather more than the thickness above indicated is attained. The surface is then turned smooth in a lathe, being supported on a Cylinder like the tablet holder 305. The tablet is then ready for use by placing over the holder or it may be kept until wanted—In keeping care should be taken to prevent access of dust.

After the tablet has been placed on the holder the detachable end of the latter is pressed down into its bearing and the cap 310 is engaged by the catch 311, which holds it down.

The record is made on or in the wax coating of the tablet by the instrument shewn in Figures 24 and 28—31. The diaphragm 320 (of Mica from six to twelve one thousandths of an inch in thickness) is held in a frame 321 between the flange 322 and a ring 323 of soft rubber tubing which is held down by the back plate 324 and screws 325 tapped into the frame. The heads of these screws project over the edge of the back plate. The recording style 326 formed of a steel wire (say $\frac{1}{12}$ of an inch in diameter) sharpened at the front or operating end like an ordinary round pointed turning tool and screw threaded at the other, is fastened to the centre of the diaphragm by the nut 327 and washer 328 which are on opposite sides of the diaphragm and clamp it between them.

The cutting edge of the style is preferably shaped to cut a groove of curved rather than of V shaped cross section—A bar 329 is hinged at one end to the frame 321 by a pivot screw 585 and at the other adjustably but rigidly fastened thereto by a screw 330—A second screw 331 bearing at the point against the top of the bar 329 assists in securing an exact adjustment and in holding the bar

rigid—At the middle of the bar is an enlargement 332 which extends into close proximity to the recording style (see figure 30) and whose bottom is polished or made smooth so that it may bear upon the wax coated tablet and move over it without injury to the wax surface.

The frame 321 is provided with a base or carrier 333 in the form of a half nut In use this nut is supported and engaged by the rotatory feed screw 334 which is journalled in bearings in the side pieces 300 and 301. The base or carrier is elongated to give a sufficient bearing on the screw to prevent the tipping of the recorder sideways. To assist in preventing this and also to prevent the Carrier being lifted from the screw a guard is provided which consists of a block 335 attached to the end of a curved slide 336. This slide is guided by the piece 337 and can be turned from the position shewn in Figure 28, when the guard does not interfere with the placing of the carrier on the screw, into the position shewn in Figures 24 and 31 when it prevents the removal. The Carrier is however free to turn on the screw as on an axle so that the Recorder under the action of gravity will press against the tablet the bar 329 forming a rest to support it. The recording style projects beyond the rest and enters the wax coating penetrating it a distance which is regulated by the adjustment of said rest or bar 329. The sound Conveyor consists of an elliptical mouth piece 338 and a tapering tube 339 both made for lightness of hard rubber in thin sheets say one thirty second of an inch thick— A metal thimble 340 is attached to the small end of the tapering tube which fits over a tubular projection 341 on the back plate. The rotation of the feed screw 334 moves the Recorder lengthwise of the recording tablet and this movement in connection with the rotation of the tablet causes the style to trace a spiral line in the wax which line becomes a sound record by talking into the mouth piece 338 and thereby impressing sonorous vibrations upon the diaphragm and style—The style then cuts a variable line whose irregularities or inequalities correspond to the sound to be recorded. The spiral line can be omitted for a given distance when desired by simply lifting the recorder from the tablet. The feed screw 334 should be so mounted as to prevent endwise movement which would tend to make the tracing line more or less zig zag.

As shewn a spring 342 (see figures 22 and 27) presses constantly upon the left end of the screw to keep it against the bearing at the opposite end. The feed screw is revolved by the friction wheels shewn in figures 22, 23 and 26—In recording the friction pinion 343 on the tablet holder communicates motion to the large wheel 344 fast on the feed screw through the intermediate 345. Thus the feed screw has a much slower rotation than the tablet holder and the convolutions of the line traced on the tablet are much closer together than the threads of the feed screw—The intermediate 345 is mounted on the stud 346 (see figure 26) which is carried by a hinged frame so that the intermediate can be moved out of contact with the pinion whenever it is desired to stop the feed without interrupting the rotation of the tablet holder. The hinged frame consists of side bars 347 which are hinged separately on the tie rod 302 and are rigidly connected with each other by tie bars 348 and 349—A spring 350 under each side bar tends to lift the frame and press the intermediate 345 against the pinion 343. The feed screw is therefore normally in engagement with the tablet holder but can be disengaged at will by pressing upon the tie bar 348. The friction wheels 351. and 352 are for reversing the revolution of the feed screw. The wheel or pinion 352 is simply a hub on the side of the intermediate 345. The wheel 351 presses against the pinion 352 and is mounted on a stud at the end of bent lever 353 which turns upon the screw stud 354 in line with the stud 346 (see Figure 26) The lever 353 thus turns about the axis of the wheel 352 and the wheel 351 may roll over the surface of the wheel 352 so as to be pressed against and thus engage the pinion 343 on the tablet holder.

The short arm of the bent lever is connected by a link 355 with the stud 356 itself secured fast to the side piece 300. When therefore the tie bar 348 and side bars 347 are depressed the lever (as shewn in figure 23) is turned to the left and

when it is sufficiently depressed the wheel 351 is held against and engaged by the pinion 343. Motion is now communicated through the wheels 343, 351, 352, and 344 the rotation of the feed screw is reversed and a more rapid rotation is imparted to it. The carrier will therefore be moved backwards (to the left in Figure 22) more rapidly than it was advanced. There will ordinarily be not much occasion to use the stop and reversing mechanism in recording It is for use in reproducing that it has been specially devised.

The reproducer (see figures 23, 25, 32, 33 and 34) has a style 357 welded or otherwise fastened to the end of a flexible strip 358 of thin steel (say one thousandth of an inch in thickness) so as to project beyond both edges of the same like a hammer head The outer end of this style (which should be somewhat more tapering at the point than the recording style) rubs over the record or tablet; the inner end presses upon a light flat spring 359 fastened at the lower end to the frame 360 of the reproducer. The strip 358 is soldered into a slit of the ear 361 on the spring which by bending between the ear 361 and where it is attached to the frame 360 allows the style and strip to be moved in or out and thus serves to hinge the same to the said frame.

The diaphragm 362 of hard rubber about seven one thousandths of an inch in thickness is pressed against a central seat in the face of the frame 360 by means of the spring 359 between which and said diaphragm is a little block 363 of cork. It serves the double function of pressing the diaphragm against its seat and also of communicating vibrations to it. Cork is used because it is light and conveys vibrations well and has sufficient friction upon the diaphragm and spring to remain in the position in which it may be placed. By leaving it to be held by friction it can be adjusted by the user to give the best effects but it can be secured by cement or otherwise in the position which the maker or adjuster of the instrument may determine preferably it occupies a position intermediate of the style 357 and the edge of the diaphragm as shewn; but it can be set directly opposite the style—In the former position there is a certain length of the spring 359 beyond the cork which length forms a tongue with a very high rate of normal vibration It absorbs a considerable portion of the small vibrations which produce scratching noises and it thus makes the articulation more distinct. It also reduces somewhat the loudness of the sounds reproduced but the increased distinctness more than compensates for any loss in loudness. Another effect which the tongue has is to return the style more perfectly when it has been pushed out by an elevation on the record. It does this because its normal vibration is quicker than that of the diaphragm or because its amplitude of vibration is larger or for both reasons. It will be understood that this spring tongue is compressed by the weight of the reproducer which is sustained by the style. This weight is actually very small the frame being made for lightness of hard rubber but in comparison with the strength of the spring tongue it is considerable.

It will be observed that the diaphragm is strained by the spring in addition to the strain due to the weight of the reproducer.

The inner end of the style 357 preferably rests in a hole or recess in the spring 359 so that it is prevented from side motion bodily although capable of rocking on the inner end as a centre—The bending of the strip 358 allows this side movement of the front end of the style to take place with the greatest freedom. A bodily movement of the style sidewise should be permitted if desired but a stop should then be used to prevent it from being pushed off the spring 359. To protect the style and other parts of the reproducer, a guard 364 is fastened to the front of frame 360 and is perforated at the centre for the passage of the style. On either side of the centre it is bent outward to form horns to support the instrument when placed face downward on a table or flat surface.

The reproducer consisting of the parts just described is mounted upon a hollow standard 365 which is hinged at the bottom to the carrier 366 by means of hollow trunnions 367 fitting in hollow uprights 368 on said carrier. The reproducer standard 365 is provided with a thumb piece 369 which can be pressed to hold up

the reproducer in placing the carrier on and removing it from the feed screw 334. There are front and back screw stops 370 and 371 which limit the movement of the reproducer independently of the carrier. This latter is provided with a half nut to rest upon and engage the feed screw the same as the carrier of the recorder It is not provided with a guard to retain it on the feed screw because it is considered unnecessary particularly when a flexible sound conveyor is employed as will presently be described. It is provided with a tail or prolongation 372 which rests upon the tie bar 348 (see figure 25) so that when this is depressed to stop or to reverse the feed screw the carrier will turn to the left (the centre of gravity being on that side of the feed screw) and automatically lift the reproducing style 357 from contact with the tablet 318 in or on which the record is formed.

When the tie bar 348 is released the springs 350 raise it and turn the reproducer and its carrier to the right so that the style again makes contact with the record. It will be observed that the pressure of the springs 350 does not force the style against the record because the reproducer is hinged to its carrier and only its very light weight comes upon the reproducing style and the record.

On the carrier is a brush 373 which when the reproducer is in motion bears upon the record and clears it of dust or shavings of wax or other lightly adhering matter in advance of the reproducing style.

The hollow standard 365 serves to convey sound from the lenticular chamber behind the diaphragm into the uprights 368 with the interior of which the coupling 374 communicates—To this coupling a flexible sound conveyor 375 is attached at one end the other end being connected with an upright branch of the tube 304. Thus the sound is conveyed from the interior of the uprights 368 through the coupling 374 and sound Conveyor 375 and tube 304 the flexibility of said conveyor 375 permitting the traverse of the reproducer as well as the turning of the carrier 366 on the feed screw 334.

The tube 304 communicates with tubes 376 and 377 one at each end of the machine. A hearing tube is or may be attached to either or both tubes. Preferably the apparatus shewn in figure 37 is employed. It consists of two elastic and flexible hollow branches 378 each provided at the outer end with a cup 379 attached by a ball and socket joint and a flexible sound conveying tube 380 for connecting both branches with the tube 376 or 377. As shewn there is a hollow metal coupling 381 at the free end of the flexible tube 380 of such exterior diameter as to fit snugly in the tube which is to receive it (see figure 25) This coupling is provided with a stop cock 387 which can be turned to cut off more or less sound if the reproduction is too loud. This diminution in loudness makes the scratching less distracting to a person with a sensitive ear.

In use the cups 379 are placed one over each ear of the listener the ball and socket joints permitting the cup to adjust itself to his head and the elasticity of the branches 378 drawing them with sufficient pressure to support the apparatus. The branches may be made of hard vulcanized rubber in order to secure the requisite flexibility and elasticity but it is evident that sound conveying branches having these qualities could be constructed of various materials and in various ways. Instead of applying the tube 380 to the tube 376 or 377 it may be connected directly with the coupling 374 the sound conveyor 375 being omitted. This has the advantage of diminishing the length of tube between the reproducer and the ear of the listener but is open to the objection that the reproducer is liable to be pulled from the machine by incautious movements on the part of the listener.

It may be observed that the reproduced sound may be listened to in various ways and that it is possible to perceive the sound by applying the ear close to the reproducer itself.

In the modified form of reproducer shewn in figure 36 the style 382 is made of a thin plate of sheet steel say three one thousandths of an inch in thickness of the form clearly shewn fastened on edge on the spring 359 being soldered in a slit in the ear 383 and a similar slit in the end of the metal end of the metal button 384

which end projects through the spring 359. This button bears upon the hard rubber diaphragm 362 and serves to communicate vibration from the style to it.

In the form of reproducer shewn in Figure 38 the style 390 is interposed between the diaphragm 362 and the flat spring 391 Near each end the style has a rounded shoulder and the ends themselves are of smaller diameter so that they may pass through holes in the diaphragm and spring, as shewn the latter pressing upon the shoulders. The spring 391 whose flat side is towards the diaphragm is attached to the strip 392 which is soldered or otherwise fastened to the post 393.

The spring 391 retains the outer or operating end of the style in place while allowing it freedom to move endwise for impressing vibrations upon the diaphragm. Preferably it exerts a light pressure inwards tending to strain the diaphragm as well as maintain itself in contact with the shoulder on the style. It supplies the place of spring 359 of figures 32 and 36. The strip 392 whose edge is turned towards the diaphragm allows the operating end of the style to move sideways— It thus supplies the place of strip 358 of figure 32. and that which forms the style 382 of figure 36. The construction of Figure 38 has the advantage over the other forms that there is less material to be moved by the vibrations of the style. The parts 391 and 392 can most conveniently be made from a round wire by filing the same flat at proper points.

The operation of the machine has practically been explained in the foregoing description, in connection with the several parts of the machine but an explanation will now be given of the operation as a whole.

Having prepared a hollow paper Cylinder and coated it with the paraffine and beeswax composition, the coated Cylinder 318 (which forms the recording tablet) is placed upon the tablet holder 305 which for the purpose is detached at one end by releasing the catch 311 and tipped up as indicated in dotted lines in figure 26 The detached end of the tablet holder is then returned to its bearings in side piece 301—Having adjusted the rest 329 of the recorder so that the recording style 326 projects beyond the enlargement 332 the desired distance say five one thousandths of an inch the recorder carrier 333 is placed on the feed screw near the left end of the same, the guard block 335 is turned under the screw and the recorder is made to rest against the recording tablet, the weight being supported by the rest 329 and the style 326 penetrating the wax coating. The fly wheel 317 is then turned revolving the tablet holder and tablet and also but at a less speed the feed screw 334. Since the Recorder is moved lengthwise of the tablet as the latter is revolved under it the recording style traces or more specifically cuts in the wax coating a spiral groove whose convolutions are closer together than the threads of the feed screw. The convolutions may be eight one thousandths of an inch apart.

To make a speech record in or on the tablet the speaker places the lower part of his face in the mouth piece 338 and says in a clear and moderately loud voice the words to be recorded the fly wheel being kept in motion at an uniform speed of say one hundred and sixty revolutions per minute. If it be desired to mark visibly a paragraph on the record it can be done by lifting the recorder for a short time from the Record then releasing it and again speaking into the mouth piece. The sonorous vibrations which the speaker impresses upon the air in the mouth piece 338 and tube 339 are taken up by the diaphragm 320 and style 326 and the latter cuts a groove in the tablet which is correspondingly irregular. After the record has been cut over the whole tablet or as much as may be desired the recorder is removed. The tablet is also removed and brushed to remove the wax shavings and then or at some future time is replaced on the tablet holder of the same, or of a similar machine.

The reproducer carrier 366 is placed on the feed screw 334 the tail 372 resting on the tie bar 348. The thumb piece 369 of the reproducer standard is pressed upon to keep the style 357 or 382 from contact with the record until the carrier has been placed on the screw. It is then released and the reproducer falling forward brings the style into contact with the Record. Preferably the grooves are so close together that the ridge between them tapers to an edge on top so that no

matter where the reproducer may be placed the style will enter a groove and being free to move sidewise will owing to the sloping sides of the groove penetrate to the bottom thereof under the action of gravity.

The fly wheel being turned at about the speed used in recording, the reproducer will follow the spiral groove cut by the recorder and will be acted upon by the inequalities or irregularities of the record and made to reproduce sounds or sonorous vibrations similar to those which acted upon the recorder to produce said inequalities or irregularities in the groove. Each elevation as it passes under the style at first presses the latter outward and when the top of the elevation is reached allows it to be returned inward by the tension of the diaphragm and spring or of the diaphragm alone. By these alternating movements repeated for each ascent and descent in the record and corresponding in extent and rapidity with the length and slope of the ascent and descent the diaphragm is thrown into vibrations corresponding in form to the sonorous vibrations which caused the irregularities or inequalities. In addition to these vibrations foreign vibrations due to various causes are also impressed upon the diaphragm. These should be disregarded as far as possible by the listener confining his attention to the speech vibrations. They will in the reproducer shewn in figures 32 and 33 be measurably taken up by the vibration independently of the diaphragm 362 of the tongue formed by the end of the spring 359 which projects beyond the block 363.

In certain speech sounds it is found that the diaphragm responds too sluggishly and that in consequence of this sluggishness the style, if influenced by the diaphragm alone, will not descend to the bottom of a depression in the groove but will skip across thus cutting off more or less of the vibration. The tongue of the spring 359 responds more readily than the diaphragm and diminishes the danger of false vibrations. This spring tongue also absorbs a portion of the speech vibrations thus diminishing the loudness of the reproduced sound; but any loss in this respect will be more than balanced by the improvement in distinctness. The vibrations of the diaphragm being impressed upon the air in the Chamber behind the same are conveyed through the standard 365 the uprights 368 the coupling 374 the flexible tube 375, the tube 304 the tube 376 or 377 the tube 380 and the branches 378 to the ears of the listener. Should it be desired to interrupt the reproduction for a time the tie bar 348 is pressed lightly thereby withdrawing the intermediate 345 from contact with the pinion 343 and stopping the rotation of the feed screw 334 At the same time the reproducer carrier 366 is allowed by the depression of the tie bar to turn sufficiently to lift the reproducer style 357 clear of the record, the front stop 370 coming in contact with the standard 365 and raising the same.

Should one or more words phrases or sentences not be understood the tie bar 348 is pressed more strongly so as to bring the wheel 351 into engagement with the pinion 343 and thereby reverse the rotation of the feed screw. When the reproducer has been carried back beyond the part of the record from which the reproduction was not understood the tie bar 348 is released the style again comes into contact with the record and the reproduction commences at the point to which the reproducer has been brought back. This repetition of what is not understood can be made as often as desired.

Friction wheels for communicating motion to the feed screw are preferred to cog or other toothed gearing (which could of course be used without departing from the invention) notwithstanding their liability to slip, because they run smoother and are more easily engaged and disengaged. A slip between the wheels causes the reproducer to be fed faster or slower than the spiral on the tablet permits the style to advance. As a general thing there is more slip in recording than in reproducing and consequently the reproducer outruns the style slightly. The style should be given enough side play to compensate for this difference in speed, but if not given the only difficulty is that the style will at length slip across the ridge between the grooves and thus escape the action of a portion of the record so that it may be necessary to bring back the reproducer by reversing the feed. The

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loudness of the reproduction is limited as desired by turning the stop cock 387 to the desired extent.

In the foregoing description of the machine shewn in the drawings, dimensions, proportions materials and other details of construction are mentioned with particularity for the purpose of enabling others more readily to make and use the new improvements and not as limitations of the said improvements since it is obvious that modifications can be made in details without departing from the spirit of the Invention and that parts of the Invention can be used separately.

The terms "recorder" and reproducer" as used herein, include simply, means (a style for example) for acting upon a tablet to form a record or being acted upon by a sound record in connection with means whereby vibrations can be impressed upon the recording style or its substitute or can be received from the reproducing style or its substitute and such frame or support as may be necessary to an operative device.

As hereafter employed they mean a recorder or reproducer of any ordinary or suitable description unless a special form is mentioned or is necessarily implied from the connection in which the Recorder or Reproducer is used. For example some forms of recorder and reproducer would not be suitable for use with a wax coated tablet.

In like manner other terms such as tablet, tablet holder, carrier, sound conveyor, gearing, &c refer to devices of any ordinary or suitable description except as otherwise indicated.

A means has been shewn for impressing vibrations upon the recording style by an electrical current through the intermediary of an electro magnet in a manner similar to that in which the diaphragm of an ordinary receiving telephone has been vibrated It is evident that other means heretofore used for vibrating a diaphragm could be used in place of the magnet also it is evident that the vibrations of the reproducing style could be taken up and transmitted by the means heretofore used for taking up and transmitting vibrations (those of a Telephone diaphragm for example).

Having now particularly described and ascertained the nature of the said Invention and in what manner the same is to be performed I declare that what I claim is:—

First. The method of forming a record of sounds by impressing sonorous vibrations upon a style, and thereby cutting in a solid body the record corresponding in form to the sound waves in contradistinction to the formation of sound waves by indenting a foil with a vibratory style, or cutting a strip by vibrating it against a revolving disc cutter; substantially as described.

~~Second. The method of forming a sound record by impressing sonorous vibrations upon a style in a direction at right angles to the recording surface and thereby cutting in a solid body a series of elevations and depressions of varying depth corresponding in form to the sound waves substantially as described.~~

~~Third. The vibratory cutting style of a sound recorder substantially as described.~~

~~Fourth. The cutting style in combination with a support permitting the same to be vibrated and means for impressing sonorous vibrations thereon substantially as described.~~

~~Fifth. A vibratory cutting style in combination with a sound conveying tube for concentrating the sound waves upon the style substantially as described.~~

~~Sixth.~~ *Second.* A vibratory cutting style in combination with a tablet or other solid body in which the record is to be cut, and mechanism for supporting the same and moving it with reference to the said style substantially as described.

~~Seventh.~~ *Third.* A sound record consisting of a tablet or other solid body having its surface cut or engraved with narrow lines of irregular or varied form corresponding to sound waves substantially as described.

~~Eighth. A sound record consisting of a tablet or solid body having its surface cut~~

~~or engraved with a number of lines of variable cross section, the irregularities or variations corresponding in form to sound waves substantially as described.~~

~~Ninth.~~—*Fourth.* The method of forming a sound or speech record, by engraving or cutting the same in wax ~~or a~~ wax like composition, substantially as described.

~~Tenth. The sound or speech record cut or engraved in wax or a wax like composition substantially as described.~~

~~Eleventh. The recording tablet of a Phonograph or sound recording machine having as the material for recording sounds or sonorous vibrations the composition of bees wax and paraffine substantially as described.~~

~~Twelfth. The sound or speech record cut or engraved in a wax like composition such as the compound of beeswax and paraffine substantially as described.~~

~~Thirteenth. A tablet or body for recording sound vibrations consisting of a paper or paste board foundation and a surface coating of beeswax and paraffine compound, substantially as described.~~

~~Fourteenth. The sound or speech record cut or engraved in a wax like composition, such as the described compound of bees wax and paraffine constituting a surface coating to a paper or pasteboard foundation, substantially as described.~~

~~Fifteenth.~~—*Fifth.* The method of making a sound or speech record by engraving or cutting in the recording material an irregular groove with sloping walls the shape of the groove representing the sound vibrations substantially as described.

~~Sixteenth. The method of making a sound or speech record by cutting in the recording material a groove with sloping walls and of variable cross section the variation corresponding in form to sound waves substantially as described.~~

~~Seventeenth. The sound record in the form of an irregular groove with sloping walls cut in solid material substantially as described.~~

~~Eighteenth. The sound record cut in wax or wax like composition in the form of an irregular groove with sloping walls substantially as described.~~

~~Nineteenth. The combination with the reproducing style of a mounting therefor which leaves said style free to move laterally and thereby adjust itself automatically to a sound record substantially as described.~~

~~Twentieth. The reproducer loosely mounted on a suitable support so that the reproducing style is capable of a lateral movement and may in consequence thereof adjust itself automatically on the record substantially as described.~~

~~Twenty first. The reproducer mounted on an universal joint and held against the record by yielding pressure substantially as described.~~

~~Twenty second. The combination with a grooved tablet or other body having a sound record formed therein of a reproducer having a rubbing style loosely mounted so that it is free to move laterally and thus adjust itself to the groove substantially as described.~~

~~Twenty third The combination with the tablet or other body having the sound record formed therein as an irregular groove with sloping walls of a reproducer having a style for rubbing over said record and mounted on an universal joint substantially as described.~~

~~Twenty fourth. The combination with a sound record formed in wax or a wax like material of a reproducer having a rubbing style for receiving sonorous vibrations from said record substantially as described.~~

~~Twenty fifth. A reproducer having a style projecting beyond the edge or end of the instrument so that the position of the point of the style on the record may be readily seen substantially as described.~~

~~Twenty sixth. In a reproducer the combination with a vibratory plate or diaphragm of a reproducing style fastened flatwise on said plate or diaphragm and bent at the end substantially as described.~~

~~Twenty seventh. The method of recording and reproducing sounds by cutting the record in a wax or wax like material and then rubbing over the record the style of a suitable reproducing instrument so as to impress sonorous vibrations on said style substantially as described.~~

~~Twenty-eighth. The method of improving a sound record by producing an incipient fusion of the surface substantially as described.~~

~~Twenty-ninth. The improvement in preparing a sound record by cutting the record in a fusible material and then producing an incipient fusion of the surface substantially as described.~~

~~Thirtieth.~~ *Sixth.* The sound recorder having a vibratory cutting style held against the recording material by yielding pressure substantially as described.

~~Thirty-first. The recording instrument having a vibratory cutting style and mounted on a hinged arm substantially as described.~~

~~Thirty-second.~~ *Seventh.* The combination with the tablet or body in which the sound record is to be made, of the recording instrument mounted on a hinged arm and resting by gravity against the tablet substantially as described.

~~Thirty-third. The recorder mounted on a hollow arm or standard which constitutes also a sound conveyor substantially as described.~~

~~Thirty-fourth. The recorder mounted upon an arm or standard hinged to its bracket or base and provided with a sound conveyor extending lengthwise of said arm substantially as described.~~

~~Thirty-fifth. The recorder mounted upon an hinged arm and combined with a sound Conveyor which extends lengthwise of the arm and is connected at the hinge with an exterior sound conveyor substantially as described.~~

~~Thirty-sixth. The reproducer mounted upon a hollow standard which forms a sound Conveyor substantially as described.~~

~~Thirty-seventh. The reproducer mounted upon a hinged arm and provided with a sound Conveyor extending lengthwise of said arm substantially as described.~~

~~Thirty-eighth. The reproducer mounted on a hinged arm and provided with a sound conveyor extending lengthwise of said arm and connected at the hinge with an exterior sound conveyor substantially as described.~~

~~Thirty-ninth. The combination with a sound recorder of a mouth-piece shaped to surround the mouth and nose of the user and to concentrate the sound upon the recording device substantially as described.~~

~~Fortieth.~~ *Eighth.* The combination with the tablet in the form of a disc and a recorder or reproducer of mechanism for causing a spiral line to be traced on the disc by the recorder or reproducer at an uniform surface speed substantially as described.

~~Forty-first. The combination with the tablet in the form of a disc, the arbor and the metal disc operating as a friction wheel, of a slide or its equivalent such as herein shewn in which said arbor is journalled and the friction pinion or revolving said disc substantially as described.~~

~~Forty-second. The combination with the recorder or reproducer, the disc, the arbor and the laterally moveable support to the arbor, of the friction pinion placed behind and bearing against the disc at a point opposite the recorder or reproducer substantially as described.~~

~~Forty-third. The combination with a recording style and the support therefor of a cup on the back of said support and the sound conveying tube terminating just behind the cup substantially as described.~~

~~Forty-fourth. In combination with the style of a sound producer, a vibratory body or plate of hard rubber upon which vibrations are impressed by said style and through which they are transmitted substantially as described.~~

~~Forty-fifth. A tablet provided with a wax-like coating and having engraved in said coating a spiral line with inequalities or irregularities corresponding in form to sound waves substantially as described.~~

~~Forty-sixth. A tablet provided with a coating of wax or wax-like substance and having a sound record engraved in said coating said engraved coating having the glazed surface which results from an incipient fusion after cutting or engraving the record substantially as described.~~

~~Forty-seventh. In combination with a sound recorder, a flaring mouth-piece shaped to fit over the face of the user and to include his nose and communicating~~

through a tube or contracted opening with the space behind the diaphragm of said recorder substantially as described.

Forty eighth. A recording tablet for a Phonograph consisting of a hollow Cylinder provided with a wax or wax like coating for receiving the sound record substantially as described.

Forty ninth. A recording tablet consisting of a hollow cylinder of paper provided with a wax or wax like coating substantially as described.

Fiftieth. The recording tablet consisting of a hollow paper cylinder coated with a composition of beeswax and paraffine substantially as described.

Fifty first. A tubular self sustaining tablet for recording sounds or sonorous vibrations substantially as described.

Fifty second. In a Phonograph and in combination with a sound recorder or reproducer and operating mechanism for causing the said recorder or reproducer to trace a spiral line on the tablet an elongated cylindrical tablet holder supported and journalled so that the tubular tablet can be placed on the same substantially as described.

Fifty third. The combination with a tubular tablet of the tablet holder for supporting and rotating the same substantially as described.

Fifty fourth. A tablet holder journaled in bearings at both ends and detachable from its support at least at one end so that a tubular tablet can be slipped over the same in combination with a sound recorder or reproducer and operating mechanism for causing said recorder or reproducer to trace a spiral line on the tablet substantially as described.

Fifty fifth. A tablet holder detachably connected with its support at one end and provided at the other end with a ball and socket bearing or bearing which permits the said holder to be tilted for placing a tubular tablet on the same in combination with a sound recorder or reproducer and operating mechanism for causing said recorder or reproducer to trace a spiral line on the tablet substantially as described.

Fifty sixth. The combination with the tablet holder the side piece or support at one end of the same and the cap therefor of the catch or fastening for said cap and the spring for moving the tablet holder when the catch is released substantially as described.

Fifty seventh. The combination with the tablet holder and the ball and socket bearing or bearing for permitting the holder to be tilted, of the support and cap at the opposite end of said holder the catch or fastening for said cap and the spring for lifting the journal from said support when the catch or fastening is released substantially as described.

Fifty eighth. The combination with the tablet holder of the box or sleeve on one journal of the same, the support and cap forming the bearing for said box or sleeve, and the catch or fastening for the cap substantially as described.

Fifty ninth. The combination with the tablet holder of the box or sleeve held on one journal of the same, the support and cap forming a bearing for said box or sleeve, and the spring whose pressure acts against said box or sleeve substantially as described

Sixtieth. The combination with the tablet holder of the ball journal and socket bearing at one end of said holder, the box or sleeve on the journal at the opposite end of said holder and the bearing for the same substantially as described.

Sixty first. The combination with the tablet holder, the recorder and the feed screw, of gearing between said holder and feed screw for revolving the latter at a slower speed than the former substantially as described.

Sixty second. The combination with the feed screw, of the carrier or the recorder or reproducer provided with a divided or partial nut for engaging said screw substantially as described.

Sixty third. The combination with the feed screw and the carrier for engaging the same of the movable guard for retaining the carrier in engagement with th screw substantially as described.

Sixty-fourth. The combination with a feed-screw of the carrier for the recorder or reproducer engaged and also supported by said screw substantially as described.

Sixty-fifth. The combination with a feed-screw of the carrier for the recorder or reproducer movable lengthwise of and engaged by said screw and capable of turning on the same as on a journal substantially as described.

Sixty-sixth. The combination with a tablet and tablet-holder of the feed-screw a carrier mounted on said screw and the recorder supported on said carrier and resting against the tablet substantially as described.

Sixty-seventh. The combination with the tablet-holder, feed-screw and gearing between the same of the hinged frame upheld by spring pressure and the devices connected therewith for putting the feed-screw out of action substantially as described.

Sixty-eighth. The combination with the tablet-holder, feed-screw and gearing between the two, of the hinged frame upheld by spring pressure and reversing mechanism connected with said frame for reversing the rotation of the feed-screw relatively to the tablet-holder substantially as described.

Sixty-ninth. The combination with a tablet-holder, a feed-screw, gearing, and an instrument, (the reproducer for example) engaged by said screw of stop-mechanism for putting the feed-screw out of action, and at the same time lifting the instrument clear of the tablet substantially as described.

Seventieth. The combination with a tablet-holder, a feed-screw gearing and an instrument, (the reproducer for example,) engaged by said screw of reversing mechanism for reversing the rotation of the feed-screw, the said mechanism being connected with said instrument so that the latter will be lifted clear of the tablet on the reversal of the feed-screw substantially as described.

Seventy-first. The combination with the tablet and the recorder held against the same by yielding pressure of a rest bearing on said tablet for supporting the recorder substantially as described.

Seventy-second. The combination with the recorder frame and style, and the means whereby sonorous vibrations are impressed upon the style of the rest attached to said frame and arranged close to said style the latter projecting beyond the rest to act upon the recording tablet substantially as described.

Seventy-third. The combination with the recorder of the adjustable rest attached to said recorder for bearing upon the recording tablet substantially as described.

Seventy-fourth. The combination with the recording style, the recorder frame and the means whereby vibrations are impressed upon the style of the rest attached to said frame and adjustable lengthwise of said style substantially as described.

Seventy-fifth. The combination with the recorder frame and the rest attached thereto, of the diaphragm and the recording style, mounted directly on said diaphragm substantially as described.

Seventy-sixth. The combination with the diaphragm, of the cutting style formed of a wire sharpened at its outer end and attached to said diaphragm so as to vibrate with the same substantially as described.

Seventy-seventh. The combination with the diaphragm of the cutting style provided with a screw-threaded shank, and the nut and washer for securing the same to the diaphragm substantially as described.

Seventy-eighth. The combination with a recorder having a cutting style, of the rest for bearing upon the recording tablet substantially as described.

Seventy-ninth. The combination with the tablet having a wax or wax-like coating to receive the record of the recorder pressed towards the tablet by yielding pressure and provided with a cutting style, and the rest for bearing upon the tablet and supporting said pressure substantially as described.

Eightieth. The combination with the recorder of the sound concentrator comprising a flaring mouthpiece and a tapering tube forming a continuation of the same substantially as described.

~~Eighty-first. The combination with the recorder of the sound-concentrator comprising a mouthpiece of elliptical form and a tapering tube forming a continuation of the same substantially as described.~~

~~Eighty-second. The combination with the reproducer of the brush for cleaning the record in advance of the reproducer substantially as described.~~

~~Eighty-third. The combination with the recording tablet having a wax or wax-like coating in which the record is cut, of the reproducer and the brush for cleaning the record in advance of the reproducer substantially as described.~~

~~Eighty-fourth. A recording tablet consisting of a hollow cylinder provided with a wax or waxlike coating and having a sound record cut in said coating substantially as described.~~

~~Eighty-fifth. The combination with the tablet and tablet holder of the feed screw, the gearing, the reproducer carrier, and the brush substantially as described.~~

~~Eighty-sixth. A reproducer having a flexible or flexibly mounted style, movable sidewise independently of the diaphragm or device to which the style communicates vibration substantially as described.~~

~~Eighty-seventh.~~ *Ninth.* A reproducer having the style attached to or in one piece with a comparatively broad and thin strip, placed on edge, said style in consequence of the flexibility of said strip being movable sidewise independently of the diaphragm or device to which the style communicates vibration, but in consequence of the breadth of said strip being practically rigid to pressure in other directions, substantially as described.

~~Eighty-eighth. The combination with the reproducer style and diaphragm or device to which said style is to communicate vibrations, of a comparatively broad and thin strip placed on edge and attached to or in one piece with said style said strip being hinged to the frame so that the style may be vibrated in the plane of said strip substantially as described.~~

~~Eighty-ninth. In a reproducer the style attached to a thin metal strip breadthwise of the same, like a hammer head substantially as described.~~

~~Ninetieth. The reproducer style attached to, or in one piece with a broad and thin strip in combination with a diaphragm or device upon which the reproduced sonorous vibrations are to be impressed, and a spring carrying said style and strip and serving as a hinge to permit them to vibrate substantially as described.~~

~~Ninety-first. The combination with the reproducer style and the diaphragm or device upon which the reproduced sonorous vibrations are to be impressed by said style of a flat metal spring interposed between the style and diaphragm and forming a yielding connection through which the reproduced vibrations are transmitted substantially as described.~~

~~Ninety-second. The combination with the reproducer style and the diaphragm or device upon which the reproduced vibrations are to be impressed by said style, of a metal spring or spring tongue whose normal vibration is quicker than that of said diaphragm and whose tension tends to move the style away from the diaphragm substantially as described.~~

~~Ninety-third. In combination with a diaphragm a frame having a concave seat for said diaphragm the walls of said seat converging to an opening in the back through which the sound may escape substantially as described.~~

~~Ninety-fourth. The combination with the diaphragm and the frame having a concave seat for said diaphragm of a spring for holding the diaphragm to its seat and for straining the same substantially as described.~~

~~Ninety-fifth. The combination with the diaphragm, its supporting frame, and the style of the spring for straining said diaphragm substantially as described.~~

~~Ninety-sixth. The combination with the diaphragm and its supporting frame, of the spring pressing inward on said diaphragm and the style carried by said spring substantially as described.~~

~~Ninety-seventh. The combination with the diaphragm and its frame, of the spring projecting over said diaphragm, the block between the spring and diaphragm and the style bearing upon the spring beyond said block substantially as described.~~

~~Ninety-eighth. The combination with the reproducer-style of the hard rubber diaphragm and the frame for supporting said diaphragm at the edges substantially as described.~~

~~Ninety-ninth. The combination with a diaphragm and its frame, of a spring projecting over said diaphragm, a style carried by said spring, and a block between the diaphragm and spring, adjustable lengthwise of the latter substantially as described.~~

~~One hundredth. The combination with the reproducer of the guard fastened over the face of the same, substantially as described.~~

~~One hundred and first. The reproducer provided with a guard fastened over the face of the same, and curved to form horns upon which the reproducer may rest, substantially as described.~~

~~One hundred and second. The double ear-piece comprising the elastic and flexible hollow branches provided each with a cup connected with the branch by a ball and socket joint substantially as described.~~

~~One hundred and third. The combination with the reproducer and the carrier therefor, and the feed screw for moving them, of a sound conveying tube on the machine frame, and a flexible sound conveyor between the reproducer and the said tube, substantially as described.~~

~~One hundred and fourth. The combination with the reproducer, of the double ear piece comprising the elastic and flexible hollow branches and the cups jointed to the ends of said branches, substantially as described.~~

~~One hundred and fifth. The combination with the feed screw and the reproducer carrier supported and capable of turning on said screw, of the reproducer hinged to said carrier, and a stop for lifting the reproducer when the carrier is turned in the proper direction, substantially as described.~~

~~One hundred and sixth. The combination with the feed screw and the reproducer carrier engaging and capable of turning on said screw, and provided with an extension or tail, of a movable bar under said tail for upholding the same, so that by depressing said bar the carrier can be turned and lift the reproducer from the tablet substantially as described.~~

~~One hundred and seventh. The combination of the feed screw the reproducer carrier mounted thereon and provided with an extension or tail and the bar under said tail for upholding the same, substantially as described.~~

~~One hundred and eighth. The combination with the reproducer carrier, of the reproducer mounted on a standard hinged to said carrier, said standard being provided with a thumb piece or device whereby the reproducer can be held up in placing the reproducer on and removing it from the machine substantially as described.~~

~~One hundred and ninth.~~ *Tenth.* The combination with the tablet, tablet holder, feed screw, gearing, reproducer and reproducer carrier, of the mechanism for controlling the rotation of said feed screw, the same being connected with said carrier so as to lift the reproducer from the tablet, when operated to stop or to reverse the rotation of said screw substantially as described.

~~One hundred and tenth. The combination with the tablet holder and the feed screw of the gearing for rotating the feed screw in the forward direction, the hinged frame for disengaging said gearing when moved a certain distance, and additional wheels connected with said frame so as by a further movement to engage said wheels and reverse the rotation of said screw substantially as described.~~

~~One hundred and eleventh. The combination with the tablet holder the feed screw, the gearing for rotating the same in a forward direction, the gearing for rotating the same backwards at a greater speed, and mechanism for bringing the latter into action, substantially as described.~~

~~One hundred and twelfth. The combination with the reproducer and a conveying tube for the reproduced sounds, of a stop cock in said tube for moderating at will the loudness of the sound to be conveyed to the ear, substantially as described.~~

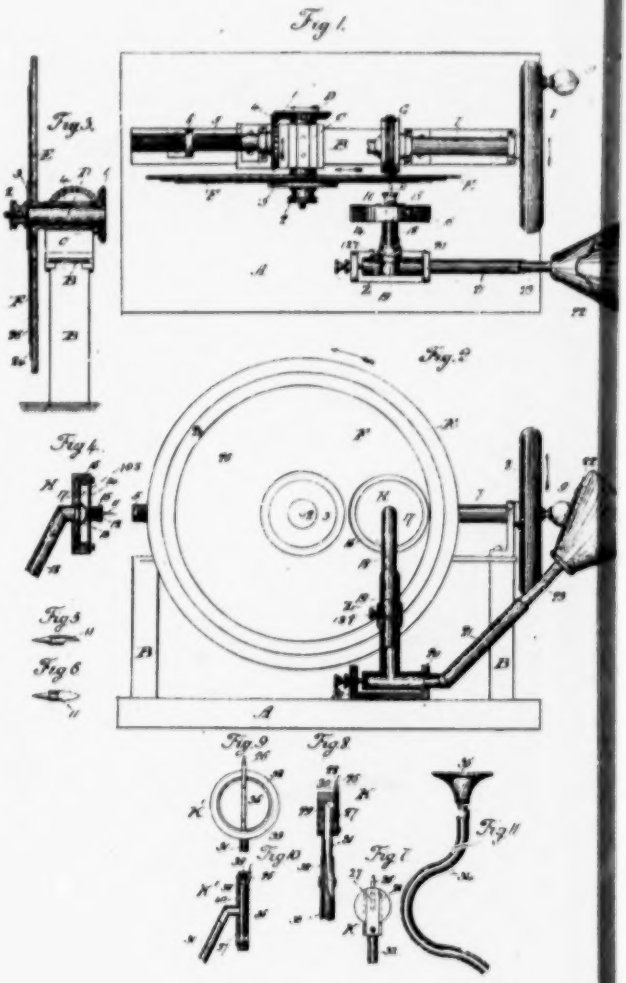
One hundred and thirteenth. The improved recording and reproducing machine comprising the following elements, in combination: a hollow cylindrical self-sustaining tablet, a tablet-holder journaled and hinged at one end to the machine frame, and journaled and detachably connected with said frame at the other, a feed-screw, gearing for rotating the said screw in either direction according to the wheels engaged, a hinged frame for controlling the rotation of said screw, and the recording and reproducing instruments with their carriers substantially as described.

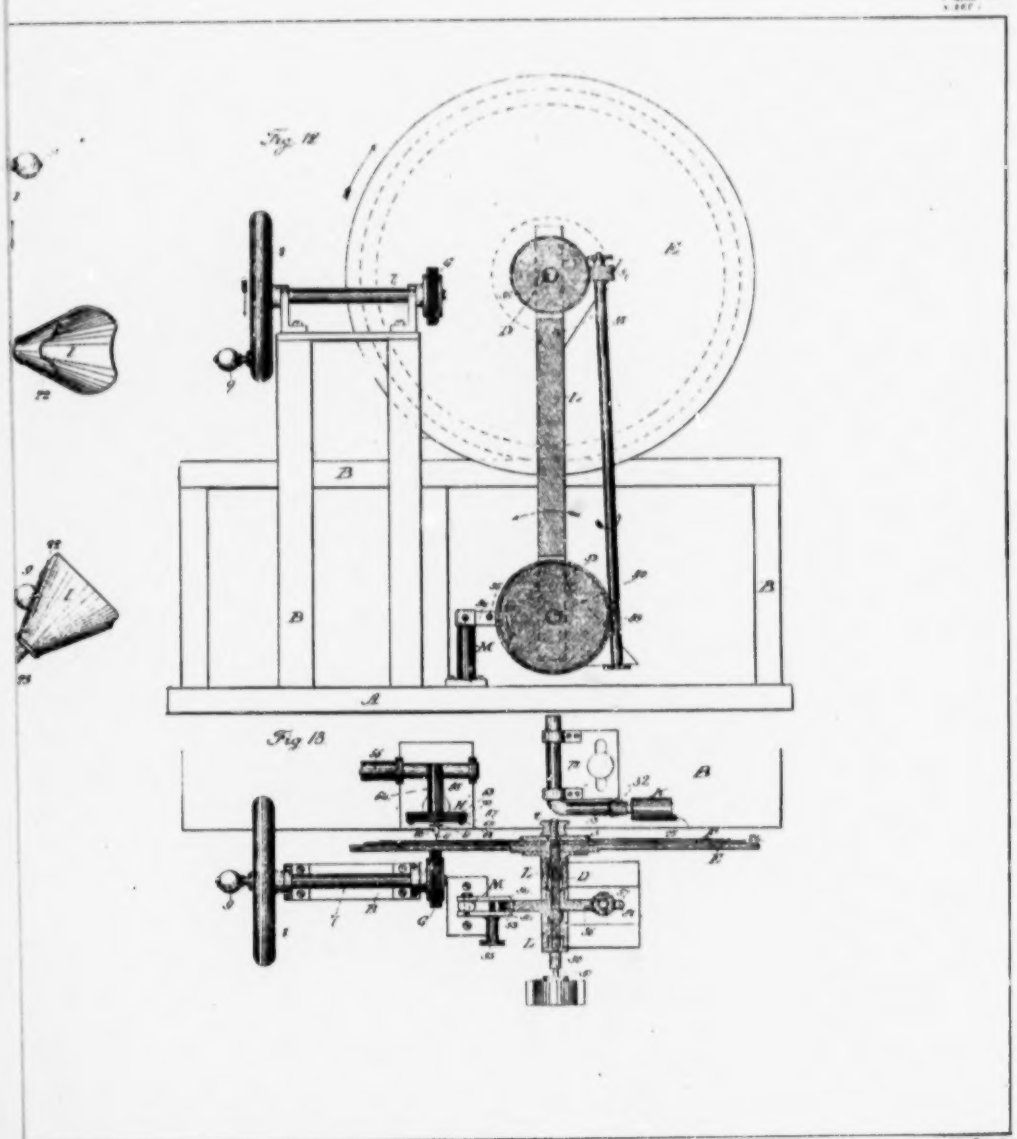
Dated this 4th day of May 1886.

J. HENRY JOHNSON,
Agent.

Redhill: Printed for His Majesty's Stationery Office, by Malcomson & Co., Ltd.
[G. 6048—125—8/1901.]

A.D. 1866. May 4. No. 6027.*
JOHNSON'S Amended Specification.





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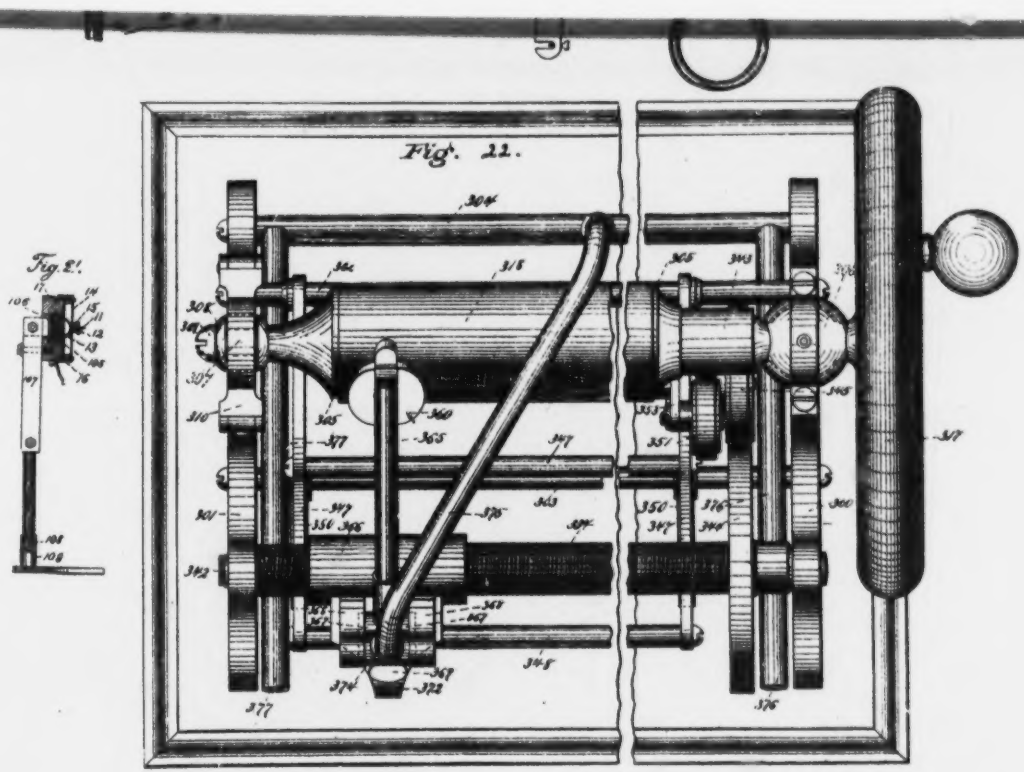

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A.D. 1866. May 4. N° 6017.
JOHNSON'S Amended Specification.
5th Edition.

Fig. 14.

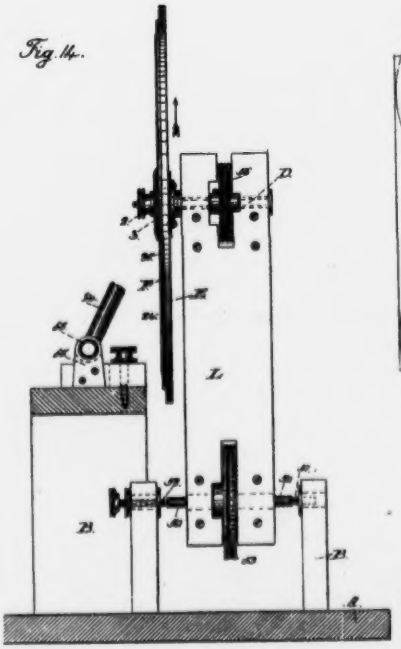

Fig. 18

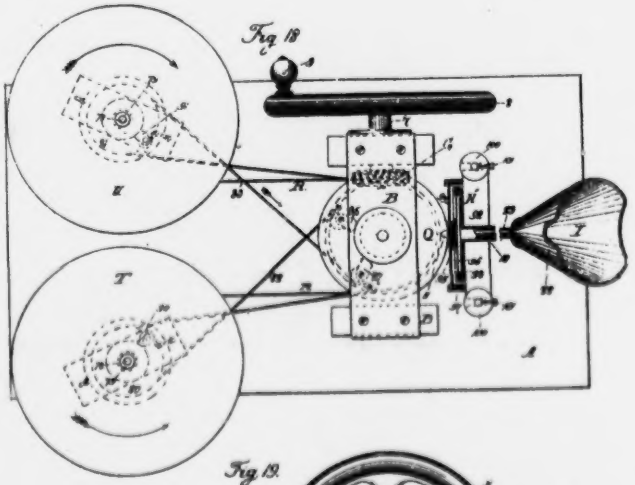

Fig. 19.

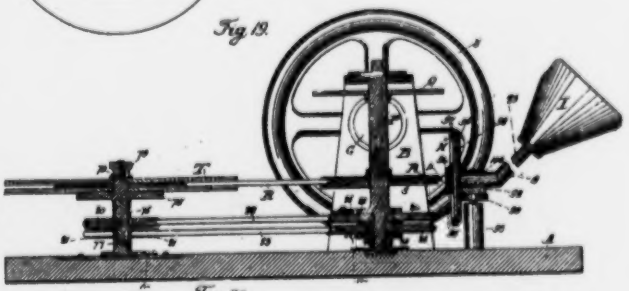

Fig. 15

Fig. 16

Fig. 17.

Fig. 20.

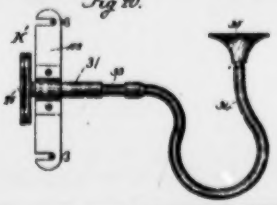

Fig. 22.

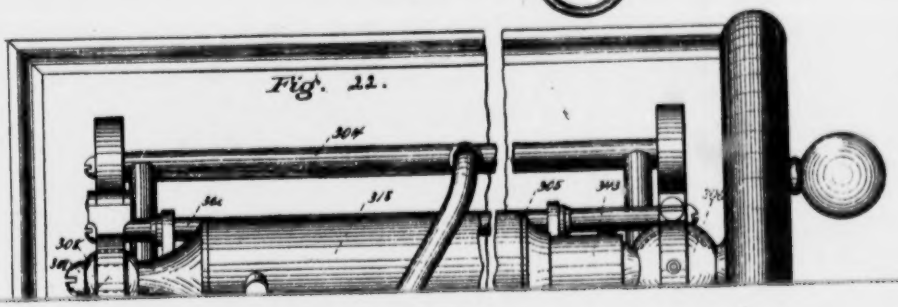

Fig. 21.

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Fig. 28.

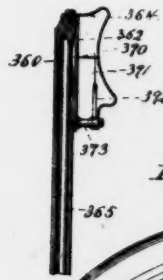
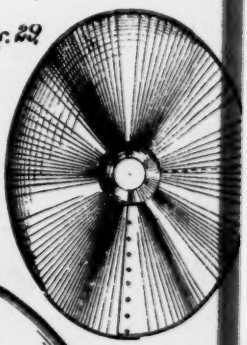


Fig. 29.



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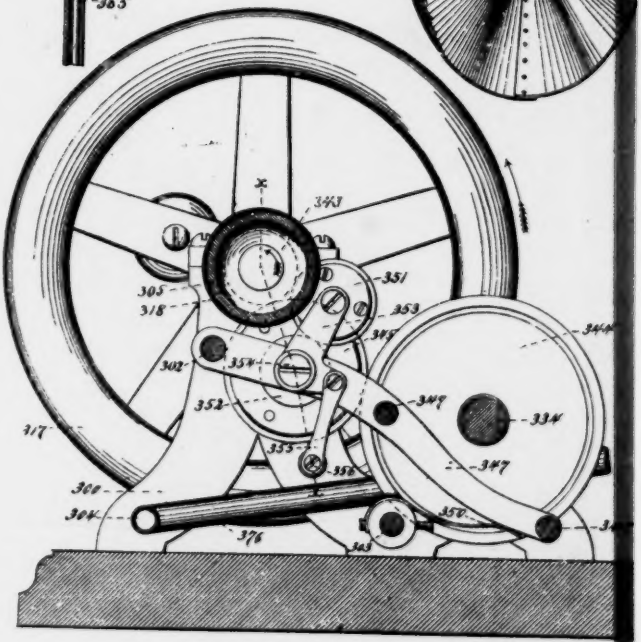


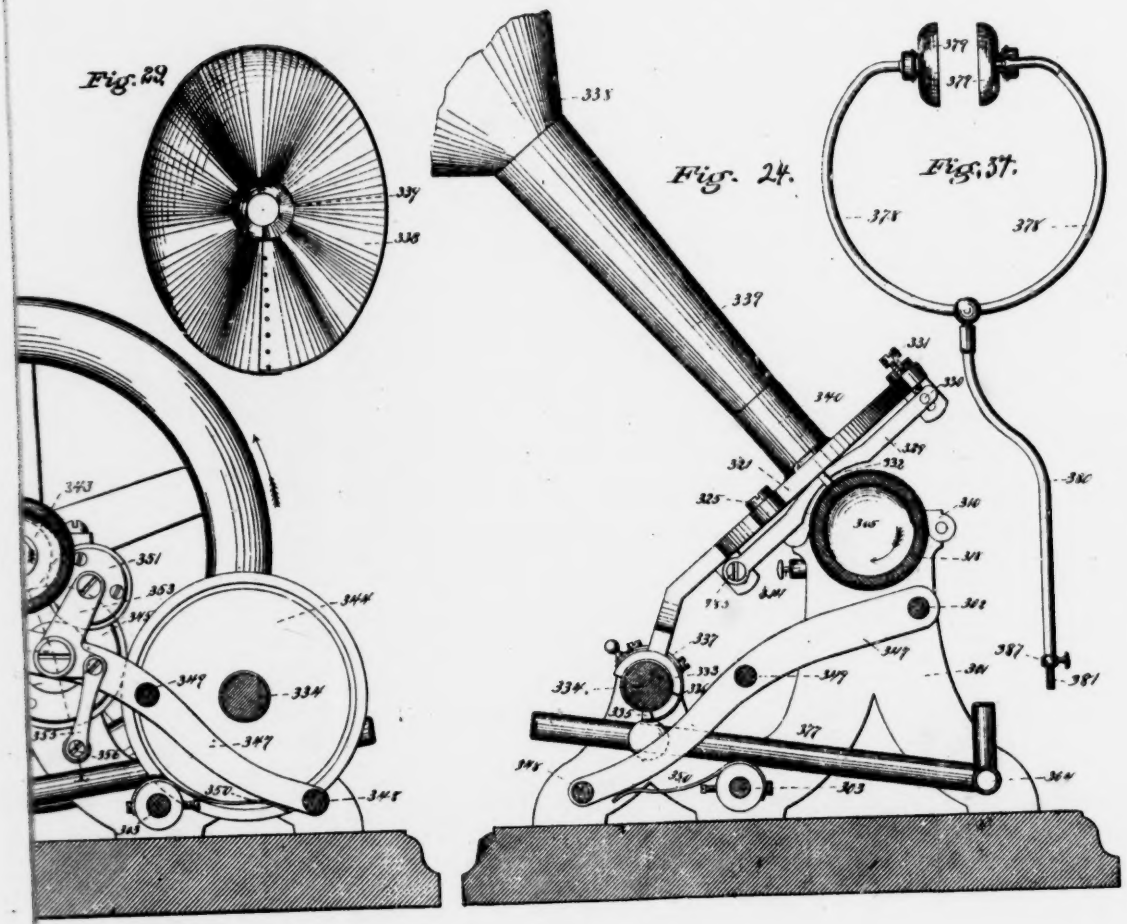
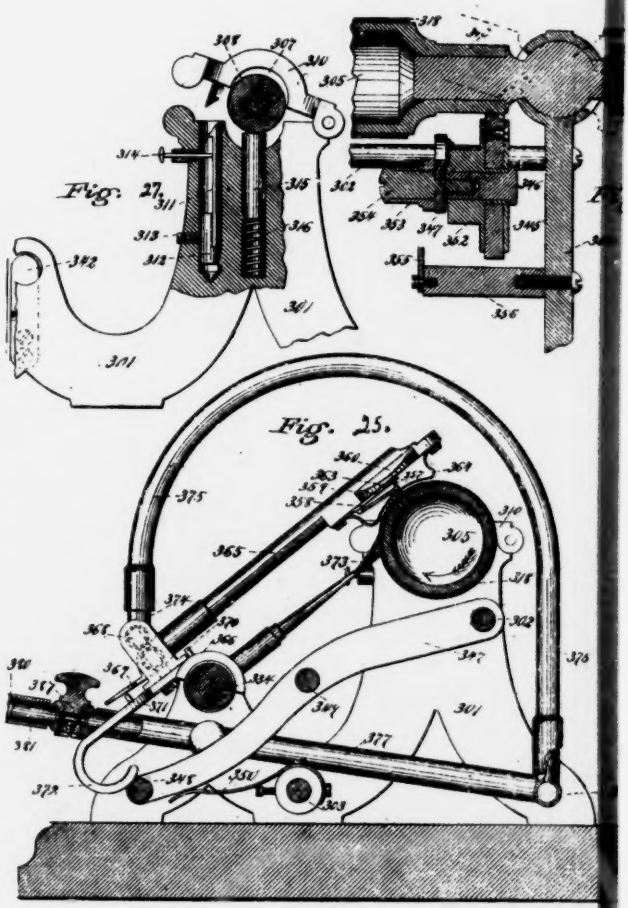


Fig. 23
Fig. 24.
Fig. 37.
[This Drawing is a full-size reproduction of the Original.]

A.D. 1886. May 4. No. 6027.*
JOHNSON'S Amended Specification
15th Edition



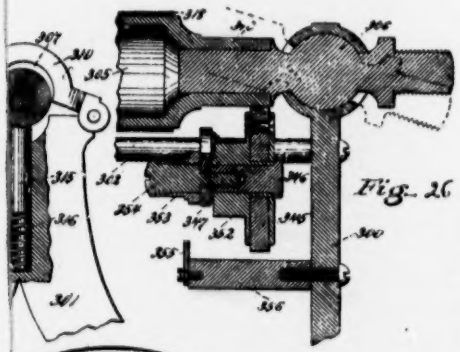


Fig. 26.

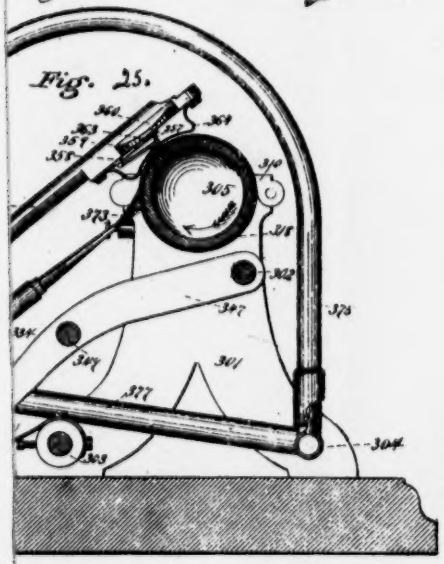


Fig. 25.

Fig. 28.

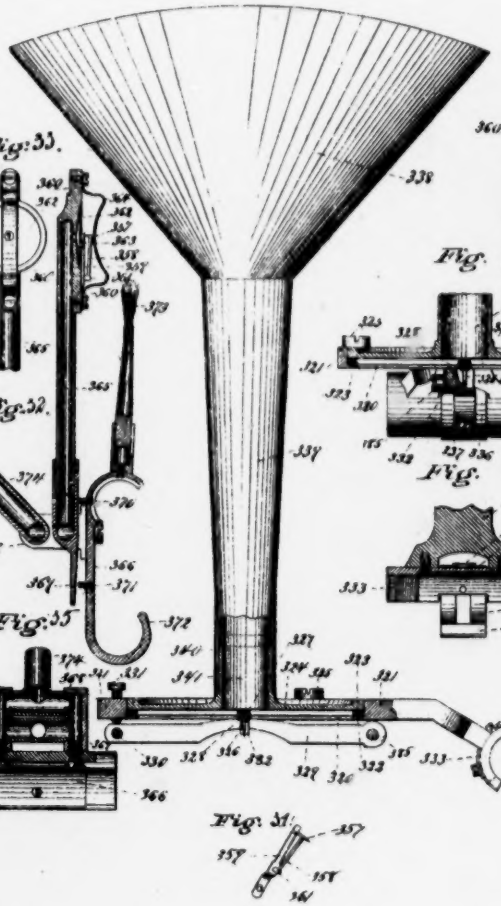


Fig. 33.

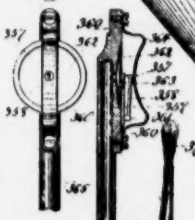


Fig. 32.

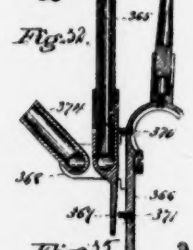


Fig. 35.

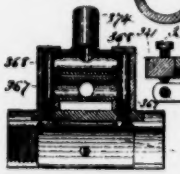


Fig. 36.

Fig. 30.

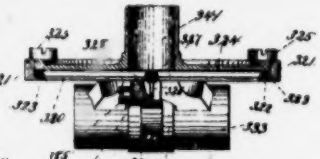


Fig. 31.

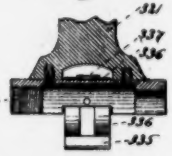


Fig. 31.

[This Drawing is a full true representation of the Original.]

N° 15,232 A.D. 1887

Date of Application, 8th Nov., 1887—Accepted, 9th Dec., 1887

COMPLETE SPECIFICATION.

Improved Method of and Apparatus for Recording and Reproducing Spoken Words and other Sounds.

EMILE BERLINER of Columbia Road Washington in the District of Columbia United States of America Electrician do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:

This invention has reference to a novel method of, and apparatus for recording and reproducing all kinds of sounds, including spoken words, and is designed to overcome the defects inherent in that art, as now practised and in the apparatus used therefor.

By the ordinary method of recording spoken words or other sounds for reproduction, it is attempted to cause a stylus attached to a vibratory diaphragm to indent a travelling sheet of tin foil or other like substance to a depth varying in accordance with the amplitudes of the sound waves to be recorded. This attempt is necessarily more or less ineffective for the reason that the force of a diaphragm vibrating under the impact of sound waves is very weak, and that in the act of overcoming the resistance of the tin foil or other material, the vibrations of the diaphragm are not only weakened, but are also modified. Thus, the record, while it contains as many undulations as the sounds which produced it, and in the same order of succession, the character of the recorded undulations is more or less different from those of the sounds uttered against the diaphragm. There is then, a true record of the pitch, but a distorted record of the quality of the sounds obtained.

The simple statement that the material upon which the record is made resists the movement of the diaphragm is not sufficient to explain the distortion of the character of the undulations; for, if that resistance were uniform, or even proportional

to the displacement of the stylus, the record would be simply weakened, but not distorted.

But it is a fact, that the resistance of any material to indentation, increases faster than the depth of indentation; so that a vibration of greater amplitude of the stylus meets with a disproportionately greater resistance, than a vibration of smaller amplitude. For this reason, loud sounds are even less accurately recorded than faint sounds, and the individual voice of a loud speaker recorded and then reproduced by the phonograph cannot be recognised.

With a view of overcoming this defect, it has been attempted to engrave instead of indent a record of the vibrations of the diaphragm, by employing a stylus shaped and operating like a chisel upon a suitably prepared surface; but even in this case, the disturbing causes above referred to are still present. In addition to this, if in the apparatus of the phonograph or graphophone type, it is attempted to avoid the disturbing influence of the increase of resistance of the record surface, with the depth of indentation or cut, as much as possible, by primarily adjusting the stylus so as to touch the record surface only lightly, then another disturbing influence is brought into existance by the fact that with such adjustment when the diaphragm moves outwardly, the stylus will leave the record surface entirely, so that part of each vibration will not be recorded at all. This is more particularly the case when loud sounds are recorded, and it manifests itself in the reproduction, which then yields quite unintelligible sounds.

It is the object of my invention to overcomethese and other difficultiesby recording spoken words or other sounds without perceptible friction between the recording surface and the recording stylus,and bymaintaining the unavoidable frictionuniform for all vibrations of the diaphragm. The record thus obtained, almost frictionless, I copy in a solid resisting material, by any of the methods hereinafter described: and I employ such copy of the original record for the reproduction of the recorded sounds.

Instead of moving the recording stylus at right angles to, and against the record surface, I cause the same to move under the influence of sound waves, parallel with and barely in contact with such surface; which latter is covered with a layer of any material that offers a minimum resistance to the action of a stylus operating to displace the same; all substantially in the manner of the well known Phonautograph by Leon Scott.

All this will more fully appear from the following detailed description, in which reference is made to the accompanying drawings which illustrates two ofthenumerous forms which my improved apparatus may assume, and in which—

Fig. 1 is a perspective view of one form of my recording and reproducing apparatus.

Fig. 2, is a like view of the recording and reproducing diaphragm with its stylus.

Fig. 3, a similar view of a portion of the support for the record surface.

Fig. 4, the same view with the record surface applied.

Fig. 5, a plan view of a phonautographic record.

Fig. 6, a perspective of a phonautographic record, copied in solid resisting material.

Fig. 7, the copied record mounted, ready for application to the support.

Fig. 8, is a perspective view of another form of my gramophone, in which the sounds are recorded upon a plain surface, as distinguished from a cylindrical surface used in connection with the apparatus shown in Figs. 1 to 7.

Fig. 9, is a plan view of the diaphragm with its support, and a recording and reproducing stylus, detached from the apparatus as a whole.

Fig. 10, is a sectional view of the same.

Fig. 11, is a cross-section on line *x*, *x*, of Figure 9.

Fig. 12, is a vertical section, showing the recording disc and its connection with the driving gear.

Fig. 13, is a sectional view of a part of the driving gear.

Fig. 14, is a section showing the connection of the driven shaft with the support of the recording disc.

Fig. 15. is a sectional view of a centering device employed in this form of apparatus; and Fig. 16 is a plan view, upon a reduced scale, of a disc with a record of sound recorded upon the same, in accordance with my invention.

The general arrangement of the first form of my apparatus is best illustrated in Fig. 1 in which a T shaped base plate A, is shown, upon which two standards H, I, serving as journal bearings for the shaft of drum G, are mounted. The drum G, may be constructed with flanges e, e^1, which project beyond the cylinder surface f, and from the edges of a gap B, left upon the cylinder surface, extend the side walls of box K as shown. A thin layer of felt, or other yielding, elastic substance, is placed upon the cylinder surface, and is bent over the edges of the gap and secured to the side walls of the box K; this layer of elastic material is designed to serve as the support for the record surface both in recording and reproducing.

For recording, I employ a thin strip of paper, parchment, metal or any other suitable substance, which is secured at both ends to bars c, d, in the manner shown in Fig. 7, with reference to a copy of a record; and is then placed upon the elastic support f^1, with the bars c, d, entering into but projecting at both ends beyond the box K, as illustrated in Figs. 1 and 4 with reference to an engraved copy of a record. Bolts g, passing through the projecting ends of bars c, d, are employed to draw the record strip tightly about the drum, and the length of the strip is such, that the ends of the same meet as nearly as practicable upon a straight line z. The record sheet is then prepared to receive the record, by covering its surface with a thin layer of any substance which is easily removed by the action of the recording stylus. I may use lamp-black, which is deposited by placing a smoky flame under the record strip, and by slowly turning the drum until all parts of the strip are covered with the deposit. It is well known that a layer of lampblack thus deposited while it adheres well to the surface of a solid body, is nevertheless, easily removed from the same; it requires only an exceedingly small force to draw a plainly visible line upon such surface owing to the fact that the spicules of carbon, of which lampblack is composed, are only loosely superimposed upon each other, and are exceedingly light. All this has long since been recognised and utilized in the production of phonautographic records, and I take advantage of these facts in my improved method of recording and reproducing sounds.

The diaphragm m, is mounted in a frame n, with its plane at right angles to the axis of drum G. A post O, is fixed to the centre of the diaphragm, and a slot in said post receives one end of stylus S, which is pivoted in the post by a pin t. The stylus extends over and beyond the frame, with its free end barely in contact with the record surface, and is also pivotally supported in a slot in a post p, secured to the frame by means of a pin u, as shown in Figs. 1 and 2.

It will now be seen, that the stylus is in effect, a lever having its fulcrum in the pin u, and that its free end can only move in lines practically parallel to the record surface. If it is now desired to produce a record of sounds, the drum is slowly and uniformly rotated by means of crank L, or by any other suitable means, and sounds are uttered or directed against the diaphragm. Under the impact of the sound waves, the diaphragm is set into vibrations, whereby the free end of the stylus is also caused to vibrate to the right and left of its normal position, removing at the same time an undulating line y, of lamp-black from the record surface, as indicated, greatly exaggerated in Fig. 5. Since, in this operation, the stylus only penetrates a uniform layer of loosely heaped carbon spicules, and barely touches the record surface, it is clear that the slight friction at the free end of the stylus will be uniform, whatever be the amplitude of vibration. Consequently the vibrations of the diaphragm will not be modified or changed by the reaction upon the same of a sensible and varying resistance, as is the case in all other mechanical sound recorders.

Having thus obtained an accurate phonautographic record, the same may be fixed, by applying a thin solution of varnish of any kind, which dries very rapidly, and which does not obliterate or change the record.

If in this process the deposit of lamp black be made thick enough, the line drawn by the stylus would represent a groove of even depth, preserving all the characteristics of the sounds which produced it, and which may be handled and touched with impunity. The latter is then removed from the drum, and may be preserved any length of time without danger of its being disfigured. This record I then copy in solid resisting material, preferably metal, either by the purely mechanical process of engraving, or by chemical deposition, or by photo-engraving. I prefer the last named process, which enables me to produce the most accurate copy of the original record, in copper, nickel or any other metal, without in any way or manner affecting the original record. The copy thus obtained, which may be multiplied to any desired extent, is a grooved wave line upon a strip or sheet of copper, or other metal, as shown in Figs. 1, 4, 6 and 7, and for the reproduction of the recorded sounds, it has the advantage over the ordinary records in tin foil, wax, etc., that it is not sensibly attacked by the reproducing stylus, and will stand an indefinite number of reproductions without the slightest variation in the accuracy and loudness of the reproduced sounds. The copied record is fixed at both ends to the bars *c*, *d*, as shown in Fig. 7, and is placed upon the elastic support f^1, upon the drum, in the same manner as has been described with reference to the original record strip, and as is illustrated in Figs. 1 and 4. Care must be taken, that the two ends of the undulatory groove *y*, meet exactly, as will be readily understood.

This condition of the apparatus is shown in Fig. 1 with the engraven record upon the drum, and the free end of the stylus entering the undulatory groove.

If now the drum is rotated with uniform speed, the end of the stylus will be forced to follow the undulations of the groove *y*, and the diaphragm will be vibrated positively in both directions in strict accordance therewith, and will therefore, reproduce the exact sounds which originally produced the record. This peculiarity of positive vibratory movement in both directions of the diaphragm, is a feature which also distinguishes my method and my apparatus, from others heretofore used.

In the phonograph and graphophone, the end of the reproducing stylus which bears upon the indented or engraved record, has a vertical upward and downward movement; it is forced upwardly in a positive manner by riding over the elevated portion of the record, but its downward movement is effected solely by the elastic force of the diaphragm, which latter is always under tension. In my improved apparatus, the stylus travels in a groove of even depth and is moved positively in both directions; it does not depend upon the elasticity of the diaphragm for its movement in one direction. This I consider to be an advantage, since by this method the whole movement of the diaphragm is positively controlled by the record, and is not affected or modified by the physical conditions of the diaphragm which conditions necessarily vary from time to time, and constitute some of the causes of imperfect reproduction of recorded sounds.

In practising my method of recording and reproducing sounds, I am not limited to the use of the identical apparatus herein shown and described; this apparatus may be varied indefinitely without seriously impairing its utility for the purposes in view.

Thus, it is not absolutely necessary that a diaphragm should be used for receiving the impact of sound waves in recording and for remitting sounds in reproducing; any sonorous body, of whatever shape and material, may be used in lieu of a diaphragm proper. The recording surface need not be mounted upon a drum, but may be supported in any suitable manner upon a support of any description which is adapted to move the same under the stylus evenly and with approximately uniform speed.

Nor do I confine myself to the use of lamp-black as a substratum for the phonautographic record, although I have found this substance to yield excellent results; any other substance which adheres well to the support, and may at the same time be removed from the same with a minimum force, may be employed.

Thus far I have described a method of recording and reproducing sounds which consists in first causing the sounds to inscribe themselves upon a layer of non-resisting material in a manner substantially like that practised by the well known

Leon Scott Phonautograph; then copying the phonautographic record in solid resisting material, preferably by the photo-engraving process, and then reproducing the sounds from the solid copy of the record.

The original record as well as the copy of the same, is obtained as has been seen, as an undulatory line of even depth, as distinguished from a line of varying depth obtained by the ordinary Phonograph and by the Graphophone.

In the second form of my invention, I retain all the fundamental features of my gramophone, but introduce certain novel features both in the process and in the apparatus, which render the attainment of the objects of a sound recorder and reproducer still more certain and more perfect.

In the original form of my gramophone above described, I employ a curved (cylindrical) surface upon which the non-resisting medium used for recording is supported; this has the disadvantage that, for the purpose of copying the record by the photo-engraving process, such surface has to be first straightened, and the flat copy obtained from the same has to be bent again to the original cylindrical form of the record surface. This involves delicate and tedious manipulations, which I avoid in my second form of apparatus, by inscribing the record of sounds upon a flat plate, and I further improve the process by arranging that flat plate horizontally, and by inscribing the record upon the under surface of the same, whereby the material removed by the recording stylus drops away from the plate, and leaves the undulatory groove of even depth clean and well defined; whereas by the method as practised with the apparatus above described, the material removed by the stylus accumulates in and about the adjacent grooves.

I further improve the process, by using a transparent plate as a support for the non-resisting medium; this plate is therefore made either of glass or some other like substance, whereby I secure several important advantages. The most important of these advantages is, that it enables me to work with parallel transmitted rays of light in the subsequent process of photo-engraving, in which the original record is thus used as a negative; and another important advantage is, the reduction of the friction of the stylus upon the support, to a minimum.

The process is further improved by the employment of a new recording medium. In the original process I use a layer of lamp-black, pure and simple, and this substance is well adapted for the purpose, on account of the slight coherence of the particles; but by reason of the floculent nature of this substance, the lines drawn upon it are more or less ragged, as can be observed under the microscope, and the photo-engraving obtained from such record displays all the defects of the original. In my improved second process, I employ a layer of a semi-fluid ink or paint, of such consistency and thickness that it will neither subside nor flow spontaneously. Such ink is practically structureless, and the lines drawn upon it are exceedingly sharp and reveal no ragged edges under a powerful microscope, and the photo-engraving from such record is far superior to a like copy from a record produced under the former process.

Referring now to Figs. 8 to 16, in which the details are marked by numerals, there is a platform 1, suitably supported, and upon this platform are mounted the operative parts of the apparatus. A metallic plate 2, provided with a longitudinal rib 3, is secured upon the platform, and standards 4, 4^1, mounted upon plate 2, are provided with a nut bearing 5, and a smooth bearing 5^1, respectively, for the shaft 6, which extends through these bearings as shown. One half, more or less of this shaft, is screw threaded as shown, and enters the nut bearing 5, and at a point near the middle said shaft passes loosely through a movable support 7, the position of which upon the shaft is determined by two collars 8, 8, as indicated in Fig. 14. The support 7, serves as a bearing for a bevel gear 9, which is centrally perforated and widens out into a circular flange 10. Upon its underside, the bevel gear 9, is recessed, and said recess fits loosely over the upper end of support 7; a screw 11 Fig. 12 passing loosely through the central perforation of bevel gear 9, screws into the head of support 7, so that the bevel gear can rotate about its axis, which coincides with the axis of screw 11. Two screw pins 12, 12, which may be either fixed or removable, project at

diametrically opposite points, from flange 10, and are designed to pass through two similarly located holes in a glass plate 13, as will be more fully described hereinafter. A bevel gear 14, fixed upon shaft 6, engages bevel gear 9, but provision is made for releasing gear 14, from the shaft if desired, for a purpose which will be explained further on. As stated above, the screw threaded portion of shaft 6, passes through nut-bearing 5, and it will now be clear, that if shaft 6 is rotated, bevel gear 9, with its flange 10, will likewise rotate, and will at the same time advance in a straight line; since shaft 6, screwing into or out of its nut-bearing 5, will carry bevel gear 14, and support 7, with it. From the bottom of support 7, two lugs 15, 15,—one on each side of rib 3, of plate 2, serve to guide the support with the parts attached thereto, in the line of said rib, which is of course parallel to shaft 6. A part of the smooth portion of shaft 6, has a longitudinal groove 16, extending to the right hand end of the shaft (as seen in Figs. 8 and 13), and a sleeve 17, loosely fitting this portion of the shaft, has a pin 18, the end of which engages groove 16, as shown in Fig. 13, so that the shaft is free to slide longitudinally through sleeve 17, and will rotate with the same if the latter is rotated.

Sleeve 17, is fitted into bearing 5^1, of standard 4^1, so as to rotate within the same, and upon that part of the sleeve which projects beyond the bearing, is keyed the compound gear 19. The latter is composed of a pinion 20, and a bevel gear 21; and a rather large bevel wheel 22, mounted upon a shaft 23, below platform 1, meshes with pinion 20.

A small bevel gear 24, meshes with gear wheel 21, and to the shaft of gear 24, are secured fans 25, which are thus driven at a high speed and serve as a regulator, as will be readily understood by those skilled in the art.

A weight 26, is suspended by cords or chains 27, from shaft 23, and if said shaft is turned by a crank 28, or otherwise, in one direction, the cords or chains are wound upon the same, as indicated in Fig. 8, and the weight 26, is raised up toward the platform. If on the other hand, the weight is allowed to descend, it will rotate shaft 23, this in turn will rotate gear wheel 22, which meshing with pinion 20, will rotate the latter and the connected shaft 6, and in the manner hereinbefore described, the support 7, will receive a rectilinear motion, while flange 10, upon bevel gear 9, will both rotate and move in a straight line. For every complete revolution of bevel gear 14, support 7, and bevel gear 9, with its connected flange 10, will be moved in the line of a diameter, a distance equal to the pitch of the screw threads upon shaft 6; and it will now be understood, that if a plate 13, is fixed to flange 10, and a fixed pencil or stylus be lightly pressed upon the plane surface of said plate, a spiral line will be drawn upon the plate. The recording stylus 29, is mounted upon a diaphragm 30, substantially in the manner shown in and described with reference to Figs. 1 and 2. The diaphragm itself, which may be of any suitable sonorous material, is mounted in a case 31, Fig. 10, a rigid tube 32, projecting from one side of the case communicating with a flexible tube 33, and with a mouth or ear-piece 34. The tube is clamped and may be adjusted in the direction of its length in a ring 35, formed at the end of a rod 36, which is adjustable in a support 37; and the latter is again adjustable vertically in a standard 38, mounted upon platform 1. A metal post 39, is fixed to the centre of the diaphragm, as shown, and its free end has an axial slot 40, into which a soft rubber tube 41, is forced and flattened. The free end of the soft rubber tube receives the stylus 29, which may be of metal or any other hard and fairly elastic material.

Preferably, the stylus is made of a flat strip of phosphor bronze, extending radially over the face of casing 31, and some distance beyond the edge of the same. At its free end, the stylus is reduced to a point, and is curved upwardly, and by turning the diaphragm case about the axis of tube 32, or by turning rod 36, in its bearing 37, or by adjusting the latter upon bracket 38, the point of the stylus may be brought into light contact with the lower face of disc 13, at a point in diameter of said disc which is parallel with shaft 6. Near the middle of its length, a hole is produced through the stylus, and a pin 42, formed at one end of a metal block 43, passes through said

hole, and into the central bore in a similar block 44. Between each block, and the adjacent face of the stylus, a soft rubber washer 45, is inserted, and the two blocks are forced together and are made to clamp the stylus between the rubber washers, by means of the pointed screws 46, working in the supports 47. The screws 46, 46, thus constitute the pivotal supports of the stylus, which is a true two-armed lever; a piece of soft rubber tubing 48, is inserted between the outer arm of this lever and the casing 31, and another piece of soft rubber tubing 49, is slipped over the stylus between the elastic support 48, and the outer end. Thus it will be seen that the stylus is elastically supported and amply dampened, and that if the diaphragm vibrates under the impact of sound waves, the free end of the stylus will move to the right and to the left of its position of rest, and parallel to the face of disc 13. The disc 13, is preferably made of glass, it is of suitable diameter and thickness, and has two holes 12^1, 12^1, Fig. 12, corresponding to the pins 12, 12, projecting from flange 10, and is placed in position upon said flange, with the pins entering the holes; the nuts 50, 50, are then screwed down, whereby the glass disc is securely clamped.

The method of recording and reproducing recorded sounds by means of this apparatus will now be easily understood. As has been stated above, the non-resisting material upon which the sound record or phonautogram is produced, is a semi-fluid, and I can use for this purpose any ink, as for instance printer's ink, of the required consistency; an even layer of this ink may be spread over the under surface of the glass disc, in any suitable manner, as for instance by means of a brush or roller, while the disc is slowly turned. But I prefer to produce the ink directly upon the disc itself, and I proceed in the following manner.

The under surface of the glass disc is first carefully polished and dried, and is then covered with a thin film of oil by means of a camel-hair brush; this is done while the disc is rotated with moderate speed. Any oil or fat may be used, but I have found linseed oil specially adapted for the purpose. A smoky flame is then held under the glass plate while the latter is slowly rotated, whereby the lamp-black ascending from the flame is intercepted by the plate and becomes deposited upon the same in a very fine layer, which, however, is instantly absorbed by and mixes intimately with the thin layer of oil, thus forming a black amorphous ink covering the under surface of the glass disc in an even, exceedingly thin layer.

The coating of ink, thus directly formed upon the disc has just the consistency and the thickness required: it will not flow spontaneously, and while it adheres well to the glass plate it requires only a minimum force to remove it from the same, and the point of the stylus in its passage through the substance of the ink experiences no perceptible resistance.

The disc is now ready to receive the phonautogram, and it is moved to the position shown in Fig. 8, with the point of the stylus near the outer edge; the point of the stylus is then adjusted into light contact with the disc, so that the coat of ink is barely penetrated by the same, and the weight 26, is allowed to descend, and to rotate shaft 6, in the manner hereinbefore described. If now, the stylus remained immovable, it would describe upon the under surface of the disc a smooth spiral, the convolutions of which continuously decrease toward the center of the disc; the pitch of the spiral is determined by the pitch of the screw upon shaft 6, and by the relative angular velocities of said shaft and of bevel gear 9, and may in practice be made as small as $\frac{1}{250}$ of an inch.

If now, during the progress of the disc, sound waves are directed against the diaphragm, through the mouth piece 34, and tubes 33, and 32, the stylus will vibrate to the right and left of the spiral line, inscribing upon the disc an undulatory line of even depth, which line will truly and accurately represent the sounds uttered against the diaphragm. The stylus removes a very sharp line of ink from the disc, leaving the latter quite transparent at this line, while it is quite opaque and will not transmit light at the places not touched by the stylus; the ink removed by the stylus drops away from the disc, as stated above, and does not accumulate in and about the grooves.

An approximate idea of the phonautogram thus produced can be obtained by inspection of Fig. 16, which represents an undulatory spiral line upon a disc with the pitch of the spiral greatly exaggerated. In the drawing, the undulatory line appears black upon a white ground, while in fact the line is transparent upon a black ground.

The phonautogram may extend to within a short distance from the edge of flange 10, and in practice the cords or chains 27, 27, are made just long enough to drive the disk up to that limit, or the apparatus is mounted at the proper height above the ground so that the weight will be arrested before the limit of progress of the disc is reached. Bevel gear 14, is then disengaged from bevel gear 9, by unclamping the same from shaft 6, and sliding it upon the same a short distance to the left hand (in the view shown in Fig. 8) and the disc is then given a single rotation by hand, whereby the stylus describes a true circle 51, Fig. 16 upon the disc. This circle, which I call the centering circle, is afterwards utilized, as will presently appear.

The glass disc, with the sound record and centering circle upon the same, is now removed, and the record may be fixed by applying a thin coat of varnish; it may then be handled with impunity.

From this record I produce a copy in copper or any other metal, by the process of photo-engraving and in this process I use the original record as a negative, which enables me to work by transmitted light, and with parallel rays; the copy thus produced will have the exact size of the original, as is well understood by those skilled in the art.

In the photo-engraved copy, the sound record appears as an undulatory line of even depth upon a solid metal disc, and the centering circle 51 is reproduced in the same manner.

For reproducing the original sounds, the centre of the centering circle is determined by well known simple geometrical constructions, and a small hole is drilled through that centre, which hole corresponds to the mathematical axis about which the glass disc had been rotated, and also marks the axis about which the metal disc must be rotated by the apparatus shown, in order that the pointed stylus applied to the starting point of the record may follow the same from beginning to end.

Two holes corresponding to the holes 12^1, 12^1, in the glass disc, are also made in the metal disc, but these holes are preferably made large enough to permit the disc to be adjusted in either direction when placed upon flange 10. Before this is done, a well fitting cylindrical block 52, is placed into that part of the cylindrical hole through the common centre of flange 10, and bevel gear 9, which is occupied by the head of screw 11, as shown in Fig. 15; this block which I call the centering block, has a fine axial hole 53 which corresponds exactly to the mathematical axis of rotation of bevel gear 9.

If now the photo-engraved copy of the record is placed upon flange 10, with pins 12, 12, passing through corresponding holes in the metal plate—a fine pin, say a sewing needle, is passed through the centering holes in the disc and in block 52, and the clamp nuts 50 are tightly screwed down. By this simple process, the metallic copy of the original record is safely and quickly centered in position; the stylus is then adjusted with its point in engagement with the outer end of the record groove, and the weight 26 is allowed to descend.

It will now be clear that the stylus wil be forced positively to follow the undulations of the record, and that the diaphragm vibrating under the stylus will emit the same sounds which produced the original record; which sounds can be distinctly heard at the ear-piece 34.

In place of the metallic copy of the original record, I can use a copy made of sealing wax, which is produced by pressing a metal plate, having the record in raised lines, upon a cake or plate of sealing wax which is first softened by heat. The metallic record may thus be preserved indefinitely without being used directly for the reproduction of the recorded sounds, but, simply as a stamp for multiplying the record quickly and cheaply for immediate use.

While I have found the process of photo-engraving to yield admirable copies of the

phonautographic record, I do not mean to limit myself to this process to the exclusion of other processes for copying and multiplying the original record in solid resisting material: and it will be readily understood that the details of construction of my apparatus and the manipulation of the same may be greatly varied without departing from the fundamental idea of my invention.

Having now particularly described and ascertained the nature of my said invention, and in what manner the same is to be performed, I declare that what I claim is:

1. The method or process of recording and reproducing spoken words and other sounds, which consists in first drawing an undulatory line of even depth in a travelling layer of non-resisting material, by and in accordance with sound vibrations; then producing the record thus obtained, in solid, resisting material, and finally imparting vibrations to a sonorous body, by and in accordance with the resisting record, substantially as described.

2. The method or process of reproducing sounds recorded phonoautographically, which consists in copying the phonautographic record in solid resisting material, and then imparting vibrations to a sonorous body, by and in accordance with the copy of the original record, substantially as described.

3. The method or process of reproducing sounds recorded phonautographically, which consists in copying the phonautographic record in solid resisting material by the process of photo-engraving and then imparting positive to-and-fro movements to a sonorous body, by and in accordance with a copy of the original record, substantially as described.

4. The method of producing a transparent phonautogram, which consists in removing an undulatory line of even depth of a deposit of ink from a travelling plate of glass, by and in accordance with sound vibrations, substantially as described.

5. The method of producing a transparent phonautogram, which consists in removing an undulatory line of even depth, of a deposit of amorphous, opaque material, from a travelling support of glass by and in accordance with sound vibrations, substantially as described.

6. The method of producing a transparent phonautogram, which consists in removing an undulatory line of even depth, extending along a volute described about a given point, of a deposit of amorphous and opaque material from a rotating disc of glass, by and in accordance with sound vibrations, substantially as described.

7. The method of producing a layer of semi-fluid ink upon a phonautographic support, which consists in first applying a coat of oil or other fat upon the support, and then depositing upon the oiled surface a thin layer of lampblack, substantially as described.

8. As a step in the method of photo-engraving a transparent record of sounds the process of photographing the same, which consists in applying such record directly upon a plate sensitive to light, and exposing the same to actinic action, substantially as described.

9. In a gramophone, the combination of a sound receiving diaphragm or other sonorous body; with a pivoted stylus controlled by a diaphragm, and controlling the same, and a support adapted to carry a phonautographic record sheet or a copy of such record, in solid resisting material, travelling in the plane of vibration of the point of the stylus, substantially as described.

10. In an apparatus for mechanically recording and reproducing recorded sounds, the combination of a sonorous body and a recording and reproducing stylus, mutually controlling each other, with a support for recording and reproducing strips, travelling in the plane of vibration of the end of the stylus, substantially as described.

11. In a gramophone, the combination of a travelling phonautographic record, consisting of a strip or sheet of solid resisting material, having upon its surface undulatory grooves of even depth, similar in form to the undulations of sound waves; with a stylus engaging the grooves of the record, and a diaphragm or other sonorous body controlled by the stylus, substantially as described.

12. In a gramophone, the combination of a sonorous diaphragm and a pivoted stylus;

with an elastic connection between the diaphragmandstylus,and an elastic reactionary dampening support for the free arm of the stylus, substantially as described.

13. In a gramophone, the combination of a diaghragm and pivoted stylus; with an elastic connection between the diaghragm and the stylus, substantially as described.

14. In a gramophone, the combination of a horizontal travelling support for the record surface; with a vibratory diaphragm and a recording stylus bearing upon the under surface of the record surface, substantially as described.

15. As an article of manufacture, a phonautographic record of spoken words or other sounds, which consists of a flexible strip or sheet of solid resisting material, having upon its surface a groove of even depth, undulating to represent sound vibrations, substantially as described.

Dated this 8th day of November 1887.

PHILIP M. JUSTICE,
55 and 56, Chancery Lane, London,
Applicant's Agent.

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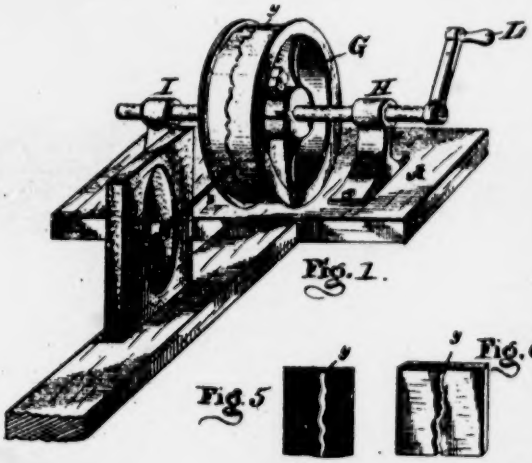
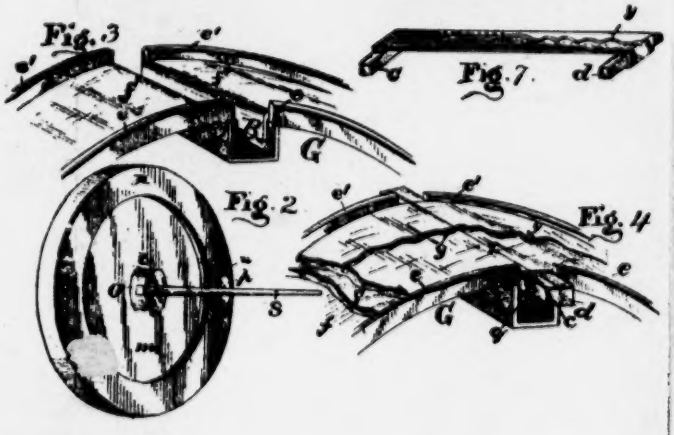
(4th Edition)

[This Drawing is a reproduction of the Original on a reduced scale.]





SHEET 1.

SHEET 2.

Fig. 8.

Fig. 13.

Malby & Sons, Photo Litho.

Malby&Sons, Phot.

A.D. 1887. Nov. 8. N° 15,232.
BERLINER'S COMPLETE SPECIFICATION.
(4th Edition)

527
(3 SHEETS)
SHEET 3.

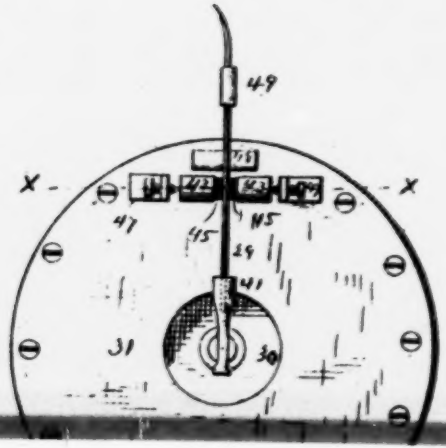


Fig. 9.

Fig. 16

...tion of the Original.]

[This Drawing is a full-size reproduction of the Original.]

Fig. 9.

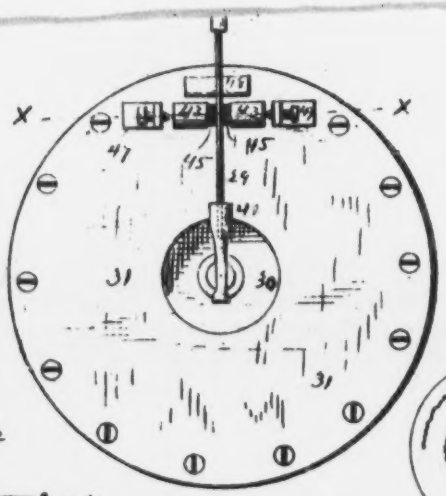


Fig. 16.

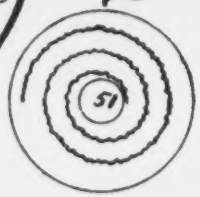


Fig. 15.

Fig. 11.

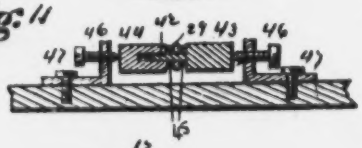


Fig. 14.

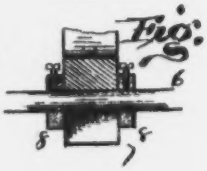


Fig. 17.

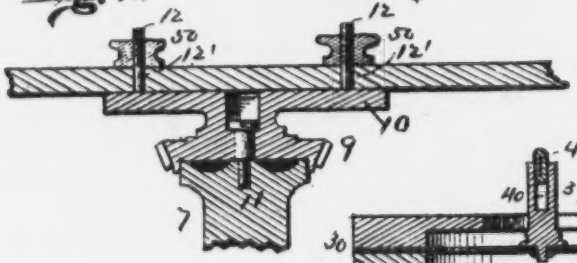
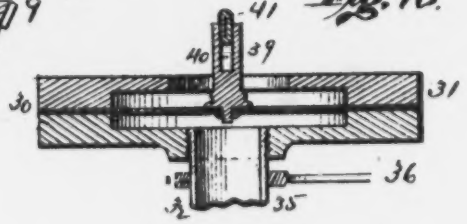


Fig. 10.



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N° 7204 A.D. 1888

Date of Application, 15th May, 1888—Accepted, 15th June, 1888

COMPLETE SPECIFICATION.

An Improved Process of Recording Sounds for Reproduction.

I, EMILE BERLINER of Columbia Road, Washington in the District of Columbia, United States of America, Electrician, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement :—

In the Specification of previous Letters Patent granted to me dated the 8th November 1887, and numbered 15,232 I have described a method of and apparatus for recording and reproducing spoken words and other sounds ; and in connection therewith, and as a part thereof, I have described a process of producing a record of sound waves in solid resisting material by photo-engraving, the phonautographic record of such sound waves having first been produced as an undulatory line of even depth in a travelling layer of non-resisting material.

My present invention consists of an improvement on such method or process of recording sounds, and it has for its object the production of a record of sound waves in solid resisting material, principally metal, by the process of direct etching ; whereby a solid unchangeable sound record is obtained more cheaply and more rapidly, either upon a flat or upon a curved surface, without the delicate and intricate manipulations incidental to the process of photo-engraving. All this will more fully appear from the following detailed description, in which I shall freely refer to what is shown and described in my aforesaid specification as a part of the now common or public knowledge.

In accordance with the rules laid down in said Specification, I produced a phonautographic record upon a travelling layer of lamp-black, or other non-resisting material ; then this phonautographic record was transferred by photo-engraving upon metal, and the metallic record thus obtained was used for reproducing the recorded sounds. In the course of my experiments I have found that in place of lamp-black, other substances may be used as the non-resisting medium for receiving the original phonautographic record, and I have also found that among the substances are such as will resist the chemical action of acids, but which offer no perceptible mechanical resistance to the movement of the recording stylus.

Upon this discovery, my present invention is based, and it consists, broadly speaking, in producing a phonautographic record through a film of a suitable etching ground deposited upon a travelling surface of resisting material, such as metal or

glass; and then subjecting said surface to the action of a suitable etching agent which attacks said surface at the places only where the etching ground has been removed by the recording stylus.

The etching ground, which is to serve as the non-resisting medium for the phonautographic record, I prepare by dissolving beeswax, paraffine, or other like substance, in a suitable solvent. By preference, I use beeswax, and dissolve the same in benzine so as to obtain a saturated solution. This solution is filtered, and care is taken to exclude, as much as possible, all dust which is always present in the ambient air.

In making the solution of beeswax, I preferably use a much greater quantity of the latter than can be dissolved in benzine at the ordinary temperature, since experience has shown that the ground thus obtained is more delicate and at the same time resists the action of the etching-agent better than when the whole of the is dissolved.

The surface which is intended to receive this ground, which may be a flat disc, or a cylinder of metal or glass, it should be smoothly polished, and must be cleansed and dried. The wax solution is then poured over this surface so as to cover the same at all points, and the solvent is then allowed to evaporate, which it does in one or two minutes. An exceedingly fine film of wax then remains adhering to the surface of the metal or glass, and the consistency of this wax is such that it offers no perceptible mechanical resistance to the action of the recording stylus, while at the same time, it resists the chemical action of ordinary etching agents.

In this respect, the film of wax deposited from the solution is quite different from a layer of wax produced by melting; the latter has such consistency, and adheres to the supporting surface with such tenacity, that considerable force must be used to penetrate the same and remove it from its support, while the wax film deposited in the manner described is so delicate, that a camels hair brush will disturb it perceptibly. Partly on account of the too great sensitiveness of a single film, and also as an additional protection against the action of the acids employed in the subsequent etching, I ordinarily, but not necessarily, apply a second coating of the solution, which when dry, leaves a film of wax of such thickness, as I have found to answer all requirements.

A plate or cylinder thus prepared, may be preserved indefinitely, and is at all times in good condition to receive the phonautographic record. Such record is produced by moving the prepared surface under a stylus actuated by sound waves to remove an undulatory line of the non-resisting film from its support, whereby the latter is laid bare along the said line; as is fully described in my specification above referred to; and as is now well understood by those skilled in the art.

The plate or cylinder is then subjected to the action of a suitable etching agent, the nature of which varies according to the material of the support. For metals, such as zinc, copper or brass, diluted nitric, hydrochloric or other acid is used; while for glass or other like materials fluoric acid or the fumes of the same must be used. In either case I obtain upon the support, within a few minutes, an undulatory groove of even depth representing the sound waves which acted upon the recording stylus; and this groove is of sufficient depth to guide and control a reproducing stylus, in the manner set forth in my former patent specification.

By the use of the ordinary etching agents, the difficulty arises, that soon after the action upon the metal base has commenced, the hydrogen, which is thereby set free, accumulates in small bubbles along the traced lines and to both sides of the same, forming a bar against the further action of the acid. In the ordinary process of etching, this difficulty is overcome by brushing the surface of the plate from time to time, whereby the gas bubbles are removed. This would be quite impracticable with the delicate etching ground which I employ, since no brush could be found that would be delicate enough to prevent the partial removal of the etching ground, and thereby the accession of the acid to portions of the plate which must remain unaffected. I, therefore, make use of an etching agent which consumes the hydrogen as soon as the same is set free, and I have found that when the plate is of zinc, chromic acid,

or its substantial equivalents when used as the etching agent, will effectively prevent the formation and accumulation of gas bubbles.

I do not, however, confine myself to any particular mode of etching, the ordinary process being followed in this respect; the same is true of the practice of re-biting, if a single exposure to the etching agent should prove to be insufficient to produce a groove of sufficient depth. From a record produced in the manner described any number of copies may be obtained by electro deposition, especially if the original record is etched in metal. In that case, however, I have found it advisable to burnish the original record groove before the plate or cylinder is placed into the depositing bath.

This is a very simple process, and consists in holding and gently pressing a pointed burnishing tool in the record groove, while the plate or cylinder is rotated; the tool is held in one hand, while the plate or cylinder is rotated by the other. In this manner the burnishing tool is guided through the record groove from one end to the other, and the slightly granular structure of the etched groove is thus polished without losing any of its essential characteristics. This process occupies only a very few minutes, but though it improves the galvano-plastic copy obtained from the original record, it is not absolutely essential. In place of a special burnishing tool, the reproducing stylus may be used, the point of which is ordinarily of hard metal, such as iridium; so that the burnishing is effected by simply using the record once or twice for reproducing the recorded sounds, in the ordinary manner.

It has been stated above, that the dissolved and filtered wax or other ground, should be carefully protected against dust, which is always present in the surrounding air, and it is obvious that the same precaution should also be taken with respect to the plate or cylinder upon which the record is made. But experience has shown that it is almost impossible to guard effectually against the accession of fine filamentary particles of dust to and into the body of the tracing or etching ground. These dust particles are so fine that they cannot, as a rule, be detected by the most searching inspection of the prepared plate; but they become very conspicuous and a very serious source of annoyance when the record is made. As the recording stylus passes through the wax or other ground, a fine undulatory line of the latter is removed, and the removed material drops away from the stylus as soon as removed, so that the point of the stylus always remains clean. This, however, is only the case when the ground is free of filamentary impurities; but if filaments of dust are imbedded in the ground, they adhere to the stylus and together with a coating of the ground are dragged through newly formed grooves, whereby the latter become uneven and receive ragged edges which seriously impair the accuracy of the record.

I have discovered an effective means for overcoming this difficulty, and it consists in simply moistening the record surface with a fluid that slightly adheres to the ground, and keeping it moist while the record is being made. I have found strong alcohol to be very effective for this purpose, when wax is used as the tracing ground, and it is used by pouring it over the ground just before the plate or cylinder is started to move under the recording stylus. The alcohol evaporates rapidly, but not so rapidly as to disappear entirely before the record is finished; and this record now shows no trace of inequality; the lines being as sharp and well defined as if cut by a graver. The point of the stylus remains quite clean, and it seems as if the filamentary particles had disappeared.

I have no definite theory by which to explain this surprising result. It is possible that the exceedingly fine dust particles are forced against the walls of the grooves and are there held, when the ground is in the peculiar state of dampness which it receives when alcohol is poured over the same; it is also possible that these particles of dust, being probably of organic matter, are dissolved by the alcohol; and it is also possible that both causes operate to keep the point of the stylus clean so as to make a sharp and well defined record. But whatever be the mode of action of the alcohol poured over the ground, its effect is highly beneficial, and its use constitutes one of my improvements.

The film of ground which I employ is so exceedingly thin, that it is practically

colorless and transparent; the record is for this reason almost invisible to the naked eye. In some cases, however, it is desirable to be able to inspect and scrutinize the record before it is exposed to the action of the etching agent, or to watch the progress of the record, and for this reason it is advisable to slightly color the ground before the record is made.

I accomplish this by exposing the record surface, after the etching ground has been applied, to the cold smoke of a flame, preferably to the smoke of the flame of burning camphor, whereby a very light deposit of lamp-black is made upon the ground, and whereby the tracings which are afterwards made by the stylus become visible as pale lines upon a grey ground.

Care must be taken in this process to hold the plate or cylinder at such distance from the flame, that the heat of the latter does not perceptibly affect the wax ground, so that the latter does not melt, whereby its peculiar consistency that adapts it to be impressed by a minimum tracing force, would be changed.

The application of alcohol or other dampening fluid, as above described, does not disturb the fine layer of lampblack and acts, in addition to its principal function of keeping the point of the stylus clean, and the tracings sharpe and well defined, also as a lubricator, that diminishes the friction of the stylus.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed I declare that what I claim is:—

1. The method or process of producing a record of sound waves in solid, resisting material for reproduction of the recorded sounds, which consists in covering the surface of such material with a film of etching ground that offers no perceptible mechanical resistance; then making a phonautographic record upon and through the etching ground, and then exposing the record to the action of a suitable etching agent substantially as described.

2. The method or process of producing a record of sound waves in solid, resisting material for reproduction of the recorded sounds, which consists in depositing upon the surface of such material a film of wax from a solution of the same in a suitable menstruum; then making a phonautographic record upon and through the wax film, and then exposing the record to the action of a suitable etching agent; substantially as described.

3. The method or process of producing a record of sound waves in solid, resisting material for reproduction of the recorded sounds, which consists in depositing upon the surface of such material a film of wax from a solution of the same in benzine, then making a phonautographic record upon and through the wax film, and then exposing the record to the action of a suitable etching agent; substantially as described.

4. The method or process of preparing solid surfaces for the reception of a phonautographic record, which consists in depositing upon said surfaces a film of tracing or etching ground, and then moistening such film with an adhering film; substantially as described.

5. The method or process of preparing solid surfaces for the reception of a phonautographic record, which consists in depositing upon said surfaces a film of wax, and then moistening the wax film with alcohol; substantially as described.

Dated this 15th day of May 1888.

PHILIP M. JUSTICE,
55 & 56, Chancery Lane, London,
Agent for the Applicant.

Redhill: Printed for His Majesty's Stationery Office, by Love & Malcomson, Ltd.
[G. 9274—125—5/1906.]

1594 CIRCUIT COURT OF THE UNITED STATES,

SOUTHERN DISTRICT OF NEW YORK.

VICTOR TALKING MACHINE COMPANY and United States Gramophone Company, Complainants, vs. LEEDS & CATLIN COMPANY, Defendant.	In Equity, No. 8797. On Patent No. 534,543.

1595

To the Honorable the Judges of the Circuit Court of the United States for the Second Circuit in and for the Southern District of New York:

The petition of the Leeds & Catlin Company, defendant herein, respectively shows:

First. That heretofore in July, 1904, the complainants filed their bill of complaint against the defendant herein, that thereafter defendant duly appeared on the August, 1904, rule day. Defendant's demurrer to the bill of complaint having been overruled, on December 21, 1905, defend-
1596 ant filed its answer to the bill of complaint and complainants filed their replication on the February, 1906, rule day; that thereafter complainants moved for a preliminary injunction against defendant and on May 2, 1906, an order was entered herein directing a writ of preliminary injunction to issue herein restraining the defendant, as provided in said order, until further order of the Court. Affidavits and exhibits were presented to the Court by complainants and defendant upon said motion.

Second. Wherefore, your petitioner, Leeds &

Catlin Company, feeling itself aggrieved by the entry of said order on May 2, 1906, hereby appeals therefrom to the Circuit Court of Appeals of the United States in and for the Second Circuit for the reasons specified in the assignment of errors, which is filed herewith, and prays that this appeal may be allowed and that a duly authenticated transcript of said order and of the record and other proceedings thereto relating upon which said order was made, together with all exhibits used upon said motion, may be transmitted forthwith to the United States Circuit Court of Appeals for the Second Circuit for review therein. 1597

Dated May 4, 1906.

LEEDS & CATLIN COMPANY, 1598

By Louis Hicks,

Solicitor and Counsel.

And now to-wit, on this 10th day of May, 1906, it is ordered that the above appeal be allowed as prayed for.

E. HENRY LACOMBE,

U. S. Circuit Judge.

Service of a copy of within petition and order on this 12th day of May, 1906, is hereby admitted.

STIMSON & WILLIAMS,

Per H. P.

Solicitors for Complainants. 1599

Filed May 12th, 1906.

1600 CIRCUIT COURT OF THE UNITED STATES,

SOUTHERN DISTRICT OF NEW YORK.

VICTOR TALKING MACHINE COMPANY, and United States Gram-o-Phone Company, Complainants, vs. LEEDS & CATLIN COMPANY, Defendant.	In Equity. No. 8797. On Patent No. 534,543.

1601

To the Honorable the Judges of the Circuit Court of the United States for the Second Circuit in and for the Southern District of New York:

And now comes the above-named defendant, Leeds & Catlin Company, by its solicitor with its petition for appeal from the order or decree entered in this cause May 2, 1906, and designated in the said petition for appeal and makes and files the following assignment of errors:

The Circuit Court erred in the following particulars:

1602 1. In not holding that the patent in suit, No. 534543, expired with the prior German Patent No. 53622, of November 20, 1889.

2. In not holding that claim 5 of the patent in suit, No. 534543, expired with the prior German Patent No. 53622, of November 20, 1889.

3. In not holding that claim 35 of the patent in suit, No. 534543, expired with the expiration of the prior German Patent, No. 53622, of November 20, 1889.

4. In not holding that the patent in suit, No. 534543, expired with the prior French Patent No. 207090, of July 19, 1890. 1603

5. In not holding that claim 5 of the patent in suit, No. 534543, expired with the prior French Patent No. 207090, of July 19, 1890.

6. In not holding that claim 35 of the patent in suit, No. 534543, expired with the expiration of the prior French Patent No. 207090, of July 19, 1890.

7. In not holding that the patent in suit, No. 534543, including Claims 5 and 35, expired with English Patent No. 15232, of November 8, 1887.

8. In not holding that the patent in suit, No. 534543, including Claims 5 and 35, expired with German Patent No. 45048, of November 8, 1887. 1604

9. In not holding that the patent in suit, No. 534543, including Claims 5 and 35, expired with French Patent No. 186827, of November 8, 1887.

10. In not holding that Berliner was not the inventor of the invention set forth in Claims 5 and 35 of the patent in suit.

11. In not holding that the invention of Claims 5 and 35 of the patent in suit, No. 534543, was anticipated by Werner Suess in Canadian Patent No. 41901, of February 11, 1893. 1605

12. In not holding that Berliner had abandoned the invention claimed in Claims 5 and 35 of the patent in suit, No. 534543, before he applied for a patent therefor.

13. In not holding that Berliner had abandoned the invention claimed in Claims 5 and 35 of the patent in suit, No. 534543, before the patent was issued.

1606 14. In not holding that Claims 5 and 35 of the patent in suit, No. 534543, should be limited to Berliner's improvements in the details of construction of his reproducer.

15. In not holding that defendant's devices do not infringe Claims 5 and 35 of the patent in suit, No. 534543.

16. In not holding that the patent in suit, No. 534543, expired February 11, 1899, with the expiration of the term of six years for which the prior Canadian Patent, No. 41901, of February 11, 1893, was granted.

1607 17. In not holding that Claims 5 and 35 of the patent in suit, No. 534543, were anticipated by English Patent No. 1644, of 1878, to Edison.

18. In not holding that the patent in suit, No. 534543, was not fairly in controversy in the prior suit between these complainants and the American Graphophone Company, and that the adjudication in that suit formed no proper basis for a preliminary injunction.

19. In not holding that at the time of the hearing of the motion for preliminary injunction defendant was entitled to have the cause heard upon
1608 the pleadings and the bill dismissed.

20. In not holding that the patent in suit, No. 534543, had expired before the commencement of this suit.

21. In not holding that the patent in suit, No. 534543, had expired before the making of the motion for preliminary injunction and the making of the order entered May 2, 1906, and hereby appealed from.

22. In not denying the motion for preliminary injunction.

23. In not dismissing the bill of complaint upon the hearing of the motion for preliminary injunction. 1609

24. In not holding that Claims 5 and 35 of the patent in suit, No. 534543, are and always have been invalid by reason of more than two years public prior use in the United States by Berliner before the date of the filing of his application therefor.

25. In not holding that Claims 5 and 35 of the patent in suit No. 534543, are and always have been invalid by reason of more than two years public prior use in the United States by T. Commerford Martin before the date of the filing of the application therefor. 1610

26. In not holding that in view of the state of the prior art Claim 5 of the patent in suit, No. 534543, is void for lack of invention.

27. In not holding that in view of the state of the prior art Claim 35 of the patent in suit, No. 534543, is void for lack of invention.

28. In not holding that in view of the prior art Claim 5 should be limited to a method of reproducing sounds wherein the stylus is vibrated substantially as described in the specification of the patent in suit, No. 534543, and shown in figures 6 and 7 thereof. 1611

29. In not holding that in view of the prior art Claim 35 of the patent in suit, No. 534543, should be limited to a sound reproducing apparatus having a reproducing stylus free to be vibrated substantially as described in the specification and shown in figures 6 and 7 thereof.

30. In not holding that Claim 5 of the patent in suit, No. 534543, is void as being for the function of a machine.

1612 31. In not holding that Claim of the patent in suit, No. 534543, is void as being for the function of a machine.

31. In not holding that Claim 35 of the patent in suit, No. 534543, is void as being indefinite, meaningless and claiming nothing.

33. In enjoining the manufacturing and selling of an article under Claim 5 of the patent in suit, No. 534543, which is limited to a method.

34. In granting the order for preliminary injunction.

1613 35. In not denying the motion for preliminary injunction because of complainants' failure to prove title to the patent in suit, No. 534543.

LOUIS HICKS,
Solicitor and Counsel for Defendant.

Service of a copy of within assignment of errors on this 12th day of May, 1906, is hereby admitted.

STIMSON & WILLIAMS,
Per H. P.
Solicitors for Complainants.

Filed May 10th, 1906.

1614

Citation on Appeal.

615

The President of the United States to the Victor Talking Machine Company and United States Gramophone Company, Greeting:

You and each of you are hereby cited and admonished to be and appear in the United States Circuit Court in the City, County and Southern District of New York, on the 8th day of June, 1906, pursuant to an appeal duly obtained by order of the Circuit Court of the United States for the Southern District of New York, wherein Leeds & Catlin Company is the appellant and you are the appellees, and show cause, if any there be, why the order or decree in said appeal mentioned should not be reversed, modified or corrected, and why justice should not be done in that behalf.

1616

Witness, the Honorable E. Henry Lacombe, United States Circuit Judge for the Southern District of New York, this 10th day of May, 1906.

E. HENRY LACOMBE,
United States Circuit Judge.

Service of a copy of this citation on this 12th day of May, 1906, is hereby admitted.

STIMSON & WILLIAMS,
Solicitors for Complainants.

Filed May 12th, 1906.

1617

1618

Stipulation.

CIRCUIT COURT OF THE UNITED STATES,

SOUTHERN DISTRICT OF NEW YORK.

VICTOR TALKING MACHINE COMPANY, *et al.*, Complainants, vs. TALK-O-PHONE COMPANY, Defendant.	In Equity, No. 8859. On Patent No. 534,543.
VICTOR TALKING MACHINE COMPANY, *et al.*, Complainants, vs. LEEDS & CATLIN COMPANY, Defendant.	In Equity, No. 8797, On Patent No. 534,543.

1619

For the purposes of the appeals from the orders for preliminary injunction entered May 2, 1906,
1620 in each of the above entitled suits, it is stipulated as follows:

First. That the drawings of the French Patent No. 186827, of November 8, 1887, to Emile Berliner, and the drawings of German Patent No. 45048, of November 8, 1887, to Emile Berliner are identical with the drawings of English Patent No. 15232, of November 8, 1887, to Emile Berliner, and that the drawings of said English patent may be used on appeal in connection with said French and German patents, and that the drawings of said

French and German patents need not be reproduced as part of the record on appeal in either of the above entitled suits. 1621

Second. That the drawings of Canadian Patent No. 41901, of February 11, 1893, to Werner Suess, assignor to Emile Berliner, are identical with the drawings of United States Patent No. 427279, of May 6, 1890, to Werner Suess, assignor to Emile Berliner, and that the drawings of said United States patent may be used on appeal in connection with said Canadian patent, and that the drawings of said Canadian patent need not be reproduced as part of the record on appeal in either of the above entitled suits. 1622

Third. That the patent in suit No. 534543, of February 19, 1895, from page 1, line 8, beginning with "My invention has reference to" to the signature, "Emile Berliner," on page 7, line 88, is identical with Canadian Patent No. 55079, of February 24, 1897, to Emile Berliner, except that in Claim 35 of the Canadian patent there is omitted the word, "In," which appears at the beginning of Claim 35 of the United States patent and that the drawings of the two said patents are identical and that the specification of said Canadian patents contains no other language except the introductory lines beginning "to all whom it may concern" and ending "Reference is made to the accompanying drawings in which," and except that said Canadian patent concludes, "Washington, D. C., November, 1895. Signed in the presence of," which shall be reproduced as part of the records on appeal; and that the said part of said United States patent, from page 1, line 8 to page 7, line 88 thereof, and the drawings thereof may be used on appeal in connection with said Canadian patent, and that such parts of said Canadian patent and the drawings 1623

1624 thereof need not be reproduced as part of the record on appeal in either of the above entitled suits.

Fourth. That the record catalogue of the Talk-o-Phone Company forming "Thomae Exhibit No. 8," annexed to complainants' affidavit of R. L. Thomae in the above entitled suit against the Talk-o-Phone Company need not be reproduced as part of the record on appeal in either of the above entitled suits.

Fifth. That the original texts in French of Berliner French Patents Nos. 186827, of November 8, 1887, 190602, of May 15, 1888 and 207090, of July 19, 1890, and the original texts in German of Berliner German Patents Nos. 45048, of November 8, 1887, 47099, of May 16, 1888 and 53622, of November 20, 1889, need not be reproduced as part of the record on appeal in either of the above entitled suits, and that only the translations of said texts need be reproduced on said appeals.

1625

Sixth. That in each of the above entitled suits the usual bond for costs in the sum of Two hundred and fifty dollars ($250) and a bond for Ten thousand dollars ($10,000) as security to complainants for the payment of all damages and profits due to infringement of Claims 5 and 35 of the patent in suit during the suspension, pending appeal, of said injunctions have been filed and approved, and that the said bonds need not be reproduced as part of the record on appeal in either of the above entitled suits.

1626

Seventh. That each and all of the original documents have referred to which according to this stipulation need not be reproduced as part of the record on appeal in either of the above entitled suits may be exhibited to the Court on appeal and be referred to and used on appeal in each of the

above entitled suits, should the Court on appeal so desire. 1627

Eighth. The purpose of this stipulation is to expedite the making of the record and to save unnecessary expense on appeal in each of the above entitled suits.

Dated New York, May 15, 1906.

HORACE PETTIT,
Counsel for Complainants above named.

LOUIS HICKS,
Counsel for Defendants above named.

Filed June 1, 1906. 1628

1629

1630 United States of America, }
Southern District of New York, } ss.:

I, John A. Shields, Clerk of the Circuit Court of the United States of America, for the Southern District of New York, in the Second Circuit, do hereby certify that the foregoing pages, numbered from 1 to 543 inclusive, contain a true and complete transcript of the record and proceedings had in said Court in the cause entitled Victor Talking Machine Company and United States Gramophone Company, Complainants-Appellees, against Leeds & Catlin Company, Defendant-Appellant, as the same remain of record and on file in my office.

1631 In Testimony Whereof, I have caused the seal of the said Court to be hereunto affixed, at the City of New York, in the Southern District of New York, in the Second Circuit, this 15th day of June, in the year of our Lord One Thousand Nine Hundred and Six and of the Independence of the said United States the One Hundred and Thirtieth.

JOHN A. SHIELDS,
Clerk.

[SEAL.]

[9577a]

1632

UNITED STATES CIRCUIT COURT OF APPEALS 1633

FOR THE SECOND CIRCUIT.

Nos. 166 and 167.—October Term, 1906. Argued October 12, 1906. Decided October 12, 1906.

THE VICTOR TALKING MACHINE COMPANY and THE UNITED STATES GRAMOPHONE COMPANY,
Complainants-Appellees,

vs.

THE LEEDS & CATLIN COMPANY,
Defendant-Appellant. 1634

THE SAME,
Complainants-Appellees,

vs.

THE TALK-O-PHONE COMPANY,
Defendant-Appellant. 1635

Appeals from the Circuit Court of the United States for the Southern District.

Before Judges WALLACE, LACOMBE and COXE.

Orders affirmed in open court.

LOUIS HICKS, for the Appellants.

HORACE PETTIT, for the Appellee.

1636 At a Term of the United States Circuit Court of Appeals for the Second Circuit, held in the Court Room, in the Post Office Building, in the Southern District of New York, on the 22d day of October, 1906.

Present—Hon. WM. J. WALLACE,
Hon. E. HENRY LACOMBE,
Hon. ALFRED C. COXE,
Circuit Judges.

VICTOR TALKING MACHINE COMPANY and UNITED STATES GRAMOPHONE COMPANY, Complainants-Appellees, vs. LEEDS & CATLIN COMPANY, Defendant-Appellant.	Order of Affirmance.

1637

This cause having come on to be heard upon the transcript of record on appeal from the decree for preliminary injunction of the Circuit Court of the United States for the Southern District of New York, filed and entered herein May 2, 1906, and having been argued by counsel, it is

Ordered, adjudged and decreed, that said decree
1638 be, and the same hereby is affirmed, with costs, and that a mandate issue.

E. H. L.
A. C. C.

(Endorsed)—United States Circuit Court of Appeals for the Second Circuit.—In Equity.—Victor Talking Machine Co. and United States Gramophone Co., complainants-appellees, *vs.* Leeds & Catlin Company, defendant-appellant.—Order of affirmance.—United States Circuit Court of Appeals, Second Circuit.—Filed Oct. 22, 1906.—William Parkin, Clerk.—Horace Pettit, attorney at Law, Stephen Girard Building, Philadelphia, Pa.

UNITED STATES OF AMERICA, } ss.:
Southern District of New York, } 1639

I, WILLIAM PARKIN, Clerk of the United States Circuit Court of Appeals for the Second Circuit, do hereby certify that the foregoing pages, numbered from 1 to 546, inclusive, contain a true and complete transcript of the record and proceedings had in said Court, in the case of Victor Talking Machine Company and another against Leeds & Catlin Company, as the same remain of record and on file in my office.

In testimony whereof, I have caused the seal of the said Court to be hereunto affixed, at the City of New York, in the Southern District of New York, 1640
in the Second Circuit, this 6th day of May, in the year of our Lord one thousand nine hundred and seven and of the Independence of the said United States the one hundred and thirty-first.

WM. PARKIN,
Clerk.

{ Seal: United States Circuit Court of Appeals, Second Circuit. }

1641

UNITED STATES OF AMERICA, *ss:*

[Seal of the Supreme Court of the United States.]

The President of the United States of America to the Honorable the Judges of the United States Circuit Court of Appeals for the Second Circuit, Greeting:

Being informed that there is now pending before you a suit in which The Leeds & Catlin Company is appellant, and The Victor Talking Machine Company and The United States Gramophone Company are appellees, which suit was removed into the said Circuit Court of Appeals by virtue of an appeal from the Circuit Court of the United States for the Southern District of New York, and we, being willing for certain reasons that the said cause and the record and proceedings therein should be certified by the said Circuit Court of Appeals and removed into the Supreme Court of the United States, do hereby command you that you send without delay to the said Supreme Court, as aforesaid, the record and proceedings in said cause, so that the said Supreme Court may act thereon as of right and according to law ought to be done.

Witness the Honorable Melville W. Fuller, Chief Justice of the United States, the 28th day of May, in the year of our Lord one thousand nine hundred and seven.

JAMES H. McKENNEY,
Clerk of the Supreme Court of the United States.

[Endorsed:] 2743. File No. 20,707. Supreme Court of the United States. No. 742, October Term, 1906. Leeds & Catlin Co. *vs.* Victor Talking Machine Co., *et al.* Writ of Certiorari. United States Circuit Court of Appeals. Second Circuit. Filed May 29, 1907. William Parkin, clerk.

United States Circuit Court of Appeals for the Second Circuit.

THE VICTOR TALKING MACHINE COMPANY and THE UNITED STATES GRAMOPHONE COMPANY, Complainants-Appellees,
vs.
LEEDS & CATLIN COMPANY, Defendant-Appellant.

Stipulation.

It is hereby stipulated by and between counsel for complainants-appellees and defendant-appellant above named in the above entitled suit, which suit was removed into the said Circuit Court of Appeals by virtue of an Appeal from the Circuit Court of the United States for the Southern District of New York, that the record and proceedings in said cause heretofore certified to the Supreme Court of the United States in support of the petition for writ of certiorari herein and on file in the office of the Clerk of the Supreme Court of the

United States, shall be taken as the return to the writ of certiorari issued herein upon said petition by said Supreme Court to said United States Circuit Court of Appeals for the Second Circuit.

May 29, 1907.

HORACE PETTIT,
Counsel for Complainants-Appellees,
Victor Talking Machine Co. et al.
LOUIS HICKS,
Counsel for Defendant-Appellant,
Leeds & Catlin Company.

Endorsed: U. S. Circuit Court of Appeals for the Second Circuit. Victor Talking Machine Co. and United States Gramophone Co., Complainants-Appellees, *vs.* Leeds & Catlin Company, Defendant-appellant. (Copy) Stipulation. United States Circuit Court of Appeals, Second Circuit. Filed Jun- 15, 1907. William Parkin, clerk.

United States Circuit Court of Appeals for the Second Circuit.

The record and all proceedings whereof mention is within made, having lately been certified and filed in the office of the Clerk of the Supreme Court of the United States, a copy of the stipulation of counsel is hereto annexed and certified as the return to the writ of certiorari issued herein.

Dated New York, June 15, 1907.

[Seal United States Circuit Court of Appeals,
Second Circuit.]

WM. PARKIN,
Clerk of the United States Circuit Court
of Appeals for the Second Circuit.

[Endorsed:] 307, 20707. United States Circuit Court of Appeals, Second Circuit. Victor Talking Machine Co. & ano., Compl'ts-Appellees, *v.* Leeds & Catlin Co., Def't-Appellant. Return to Certiorari.

[Endorsed:] File No. 20,707. Supreme Court U. S. October term, 1907. Term No. 307. Leeds & Catlin Co., petitioner, *vs.* Victor Talking Machine Co. et al. Writ of Certiorari and return thereto. Filed June 17, 1907.

Supreme Court of the United States. 1

LEEDS & CATLIN COMPANY, Petitioner, vs. VICTOR TALKING MACHINE COMPANY and UNITED STATES GRAMOPHONE COMPANY, Respondents.	OCTOBER TERM, 1906.

2

And now comes the petitioner above named and upon due notice to the Victor Talking Machine Company and the United States Gramophone Company, respondents above named, prays this Honorable Supreme Court of the United States that its writ issue to the United States Circuit Court of Appeals for the Second Circuit commanding the said Court to certify to this Court its records and proceedings in the above entitled suit, to the end that the said suit and *decree for injunction* may be reviewed and determined by this Court.

Dated New York, May 4, 1907.

3

LOUIS HICKS,
Solicitor for Petitioner.

4 SUPREME COURT OF THE UNITED STATES.

LEEDS & CATLIN COMPANY, Petitioner, vs. VICTOR TALKING MACHINE COMPANY and UNITED STATES GRAMOPHONE COMPANY, Respondents.	October Term, 1906.

5 TO THE HONORABLE CHIEF JUSTICE AND ASSOCIATE JUSTICES OF THE SUPREME COURT OF THE UNITED STATES:

The petitioner above named respectfully shows:

This is a patent suit in equity involving several most important questions of the patent law of this country. The precise questions involved have never been decided by this Court and are of such importance and of such general application that the petitioner respectfully submits that the writ of *certiorari* hereby prayed for should be granted, to the end that the important, general questions of patent law presented by the record in this suit should be
6 considered and decided by this Court.

The jurisdiction of this Court, under the circumstances of this suit, to grant the writ of *certiorari*, to review the case upon the merits and to *dismiss the bill* is clear, as hereafter shown (Point Twelve, pp.), under the decision in *Harriman* v. *Northern Securities Co.*, 197 U. S., 244, 286, and cases cited.

At the time of presentation of this petition there is also presented another petition for writ of *certiorari* to review the judgment finding this petitioner in contempt for alleged violation of the

injunction decreed in this suit. The record in the 7
injunction proceedings, that is the record in this suit, is part of the record in the contempt proceedings; in other words, the record in the contempt proceedings consists of the record in this suit upon the merits and of the record of further proceedings for contempt.

In order to shorten this petition and, at the same time, to present to the Court for reference a complete argument and citation of authorities in support of the points urged in this petition, a copy of petitioner's brief in the Circuit Court of Appeals is hereto annexed. Prefixed to said brief is a short *summary and index* of the argument, from which the Court can at once fully understand the questions raised and refer to the pages of the brief where 8
the authorities are cited and discussed.

Both in the Circuit Court and in the Circuit Court of Appeals defendant contended that the case was before the Court for determination upon the merits. The failure of the Circuit Court to dismiss the bill was assigned as an error in the Circuit Court of Appeals (Assignment of Errors, No. 23, p. 537) and defendants' right to a dismissal of the bill was argued at page 198 of petitioner's brief in the Circuit Court of Appeals.

The questions presented by the record and raised by the assignment of errors (p. 534) in this suit are briefly as follows:

9

First.—WHETHER UNDER A PROPER CONSTRUCTION OF § 4887 OF THE REVISED STATUTES AS IT EXISTED WHEN THE PATENT IN SUIT WAS GRANTED ON FEBRUARY 19, 1895, A HOME PATENT EXPIRES WITH THE EXPIRATION OF THE LEGAL TERM OF A PRIOR FOREIGN PATENT GRANTED TO THE SAME INVENTOR, WHERE THE INVENTION DESCRIBED AND CLAIMED IN THE PRIOR FOREIGN PATENT IS AN INVENTION FOR WHICH THE HOME PATENT WAS GRANTED, ALTHOUGH

10 THE HOME PATENT CONTAINS CLAIMS COVERING SUBJECT MATTER NOT DESCRIBED OR CLAIMED IN THE FOREIGN PATENT IN ADDITION TO CLAIMS COVERING THE INVENTION DESCRIBED AND CLAIMED IN THE PRIOR FOREIGN PATENT.

(*This question is discussed under Points Two and Three, pp. 37, 79, of petitioner's brief in the Circuit Court of Appeals.*)

This question arises upon the evidence showing that the patent in suit No. 534,543, granted February 19, 1895, to Emile Berliner for improvements in gramophones, describes and claims in addition to
11 other matter, the invention for which German patent No. 53,622, of November 20, 1889, was previously granted to Berliner. In other words, *the invention described and claimed in the prior German patent is an invention for which the patent in suit was granted*, and the question is whether the patent in suit expired with the expiration of the legal term of the prior German patent before this suit in equity was begun under the provision of § 4887 of the Revised Statutes, which reads as follows:

> "But *every patent* granted for *an invention which has been previously patented in a foreign country* shall be so limited as to expire *at the same time with the foreign patent*, or,
12 if there be more than one, *at the same time with the one having the shortest term*, and in no case shall it be in force more than seventeen years."

The patent in suit will be found at pages 452–462 of the record, and the attention of the Court is directed especially to claims 24–34, to figures 6 and 7 and to the description of figures 6 and 7 set forth in lines 34–102 of page 5 of the patent. The German patent will be found at pages 150–154 of the record. *The invention described and claimed in the German patent and illustrated in the drawings of the Ger-*

man patent is unquestionably and concededly the same invention as that described, claimed and illustrated in the parts of the patent in suit above referred to. Moreover, the patent in suit states that while one feature of the invention has reference to improvements in the method of recording, a feature not involved in any way in this suit, the other features of the invention have reference to the construction of the details of both the recorder and reproducer of the gramophone (p. 1, lines 17-35 of the patent in suit). The German patent describes, claims and illustrates the reproducer of the gramophone, and the infringement alleged in this suit is an infringement which relates solely to a gramophone intended only for the reproduction of sound. 13

Under point two, pages 37-79, of petitioner's brief in the Circuit Court of Appeals, a copy whereof is hereto annexed, the many decisions of this Court and of the lower courts to the effect that *a home patent cannot expire in parcels, cannot be construed as running partly to one date and partly to another*, are set forth and the identity of the invention described and claimed in the German patent with the invention described and claimed in claims 24-34 of the patent in suit is fully shown. The *test* of the clear provision of the statute is, whether the invention for which the prior foreign patent was granted is an invention for which the home patent was granted. If so, the statute applies, and if the statute applies at all the home patent expires with the foreign patent. The effect of the statute cannot be avoided, under the authorities cited, by describing and claiming in the home patent something which was not described or claimed in the prior foreign patent. *It is the invention described and claimed in the prior foreign patent* which, if covered by the home patent, will cause the home patent to expire with the foreign patent. 14 15

Under Point Three, pages 79-89, of petitioner's brief in the Circuit Court of Appeals, the same question is discussed with reference to Berliner's prior French

Patent No. 207,090 of July 19, 1890, which expired July 19, 1905, before the granting of the injunction herein, but after the filing of the bill of complaint. The French patent described and claimed not only the reproducer, but also the recorder described and claimed in the patent in suit. If the decisions of the lower courts in the case at bar are permitted to stand without reversal, the patent in suit will be held *to expire in parcels*, notwithstanding the controlling decisions of this Court that such a result "*would be productive of endless confusion*," and is impossible under the statute (*Siemens' Admr.* v. *Sellers*, 123 U. S., 276, and other cases cited at pages 55–79 of petitioner's brief in the Circuit Court of Appeals).

Second.—WHETHER UNDER A PROPER CONSTRUCTION OF § 4887 OF THE REVISED STATUTES AS IT EXISTED WHEN THE PATENT IN SUIT WAS GRANTED ON FEBRUARY 19, 1895, A HOME PATENT EXPIRES WITH THE EXPIRATION OF THE LEGAL TERM OF A PRIOR FOREIGN PATENT GRANTED TO THE SAME INVENTOR WHERE THE CLAIMS RELIED UPON OF THE HOME PATENT INCLUDE ALL THE FUNDAMENTAL FEATURES OF THE PRINCIPAL INVENTION OF THE PRIOR FOREIGN PATENT, AND WHERE THE SAID CLAIMS OF THE HOME PATENT EMBODY, ACCORDING TO THE EXPRESS STATEMENT OF THE PATENTEE, A MERE MODIFICATION OF THE PRINCIPAL INVENTION OF THE PRIOR FOREIGN PATENT.

(*This question is discussed under Point Four, page 90, of petitioner's brief in the Circuit Court of Appeals.*)

In other words, the question is whether where the home patent claims *part* of the features of an invention and the prior foreign patent claims *other features* of the *same invention*, and the claims of

both the home patent and the prior foreign patent include the *main features* of the one invention, the home patent expires with the expiration of the legal term of the prior foreign patent. 19

This question arises upon the evidence showing that the claims in suit, 5 and 35, of the patent in suit cover part of the features of the invention described and claimed in three prior foreign patents to Berliner, and include the main features of that invention, being, according to the express statement of the patentee, a mere modification of the invention described and claimed in the three prior foreign patents referred to.

Claims 5 and 35 of the patent in suit, being the only claims involved, read as follows: 20

> "5. The method of reproducing sounds from a record of the same, which consists in vibrating a stylus and propelling the same along the record by and in accordance with the said record, substantially as described."
>
> "35. In a sound reproducing apparatus consisting of a traveling tablet having a sound record formed thereon and a reproducing stylus shaped for engagement with said record and free to be vibrated and propelled by the same, substantially as described."

The three prior foreign Patents to Berliner referred to are English Patent No. 15,232, of November 8, 1887, found at pages 516–527 of the record; French Patent No. 186,827, of November 8, 1887, found at pages 123–124 of the record and identical with the English patent in every respect: and German Patent No. 45,048, of November 8, 1887, found at pages 132–144 of the record. The sixteen figures of the drawing of the German patent are identical with the sixteen figures of the drawings of the French and English patents. Therefore, by stipulation (p. 540), the drawing of the English patent is to be used in connection with the French and German patents. The specification of the German 21

22 patent describes and claims the invention described and claimed in the French and English patents. A consideration, therefore, of the English patent is sufficient for a discussion and presentation of this point.

Claim 9 of the English patent reads as follows:

> "9. In a gramophone, the combination of a sound receiving diaphragm or other sonorous body; with a pivoted stylus controlled by a diaphragm, and controlling the same, and a support adapted to carry a phonautographic record sheet or a copy of such record, in solid resisting material, travelling in the plane of vibration of the point of the stylus, substantially as described."

23

The English, French and German patents describe and claim the inventions and all the subject matter described and claimed in Berliner's United States patents No. 372,786, of November 8, 1887, found at page 416 of the record, and No. 564,586, of July 28, 1896, found at page 463 of the record. Patent No. 564,586 was not issued until after the patent in suit was issued, although it was applied for on November 7, 1887, nearly five years before the filing on March 30, 1892, of the application for the patent in suit. Figures 1–9 of Patent No. 564,586 are identical with figures 8–16 of the English, French and German patents, and the description and claims of

24 Patent No. 564,586 clearly describe and claim the invention which is included in the English, French and German patents and illustrated in Figures 8–16 thereof.

The seven figures of the drawing of Patent No. 372,786, are identical with Figures 1–7 of the drawings of the English, French and German patents, and the description and claims of Patent No. 372,786 describe and claim the invention included in the English, French and German patents and illustrated in Figures 1–7 of the drawings thereof.

Patent No. 564,586 shows two figures, 10 and 11, of the drawing not shown in the English, French

and German patents. Fig. 11 is unimportant and need not be considered. Berliner states in Patent No. 564,586 (p. 2, lines 22–24): 25

> "Fig. 10 is a sectional elevation of a *modified form* of my reproducing apparatus."

After describing in Patent No. 564,586 the main features of his invention, including the method of and apparatus for the recording and reproducing of sound, Berliner then refers to Fig. 10 and says (p. 4, lines 90–99):

> "Both the process and the apparatus thus far described may be modified in various ways without departing from the main features of my invention. So, for instance, I can dispense with the centering device and can rotate the record upon a stationary axis, if the diaphragm with its attached stylus is mounted in a manner to make it follow the spiral record. An arrangement of this character is shown in Fig. 10." 26

It is clear, therefore, that Fig. 10 of Patent No. 564,586 is merely a modified form of Berliner's reproducing apparatus and includes the main features of his invention. Obviously claim 8 of Patent No. 564,586 is to be read upon Fig. 10 as well as upon Fig. 1 thereof. Claim 8 of that patent, No. 564,586, is substantially identical with claim 9 of the English patent above quoted, and claim 8 reads as follows: 27

> "8. In a gramophone, the combination of a sound-receiving sonorous body; with a pivoted stylus controlled by and controlling the same, and a support adapted to carry a phonautogramic recording-service, or a copy of such record in solid resisting material, traveling in the plane of vibration of the point of the stylus; substantially as described."

The significance of the foregoing statements will now appear. In the prior suit of these complainants

against the American Graphophone Company (145 Fed., 350), the Circuit Court of Appeals disposed of the defense of more than two years' prior public use upon the ground that the invention, protected by claims 5 and 35 of the patent in suit, was illustrated in Fig. 10 of Patent No. 564,586 and described in the specification thereof. Although claims 5 and 35 of the patent in suit may protect some features of the invention not claimed in Patent No. 564,586 or in the English, French and German patents, nevertheless, claims 5 and 35 of the patent in suit are to be read upon Fig. 10, and the description of Fig. 10 contained in the specification of Patent No. 564,586. Therefore, the Circuit Court of Appeals held in the prior suit (see the opinion of that court in that suit set forth in the record in this suit at pp. 73-74) that Berliner was entitled to the date of November 7, 1887, as the date upon which he filed his application for the invention of claims 5 and 35 of the patent in suit, although the application for the patent in suit was not filed until March 30, 1892, and although the special features set forth in claims 5 and 35 of the patent in suit of the inventions described and claimed in Patent No. 564,586 were never claimed upon the application filed November 7, 1887, which resulted on July 28, 1896, in Patent No. 564,586. As the evidence contained in the record conclusively proves without contradiction that the invention of claims 5 and 35 of the patent in suit was in public use more than two years prior to the filing of the application of the patent in suit on March 30, 1892, the circumstances above stated raise a serious question hereafter to be considered under the next point as to whether or not claims 5 and 35 of the patent in suit are not invalid because of such prior public use. The point here under discussion, however, is that the Circuit Court of Appeals, both in the prior suit and this suit, was, in order to overcome the defense of prior public use, obliged to hold that the invention of claims 5 and 35 of the patent in suit was

included in the reproducing apparatus illustrated 31
in Fig. 10 and described in the specification and claimed in claim 8 of Patent No. 564,586, applied for November 7, 1887. As Berliner in that patent expressly states in accordance with the fact that the reproducing apparatus shown in Fig. 10 of that patent is a mere modification embodying all the main features of his invention described and claimed in that patent, and as claim 8 of that patent unquestionably covers the reproducing apparatus shown in said Fig. 10 as well as the reproducing apparatus shown in Fig. 1, and as the identical claims 9 of the English and French patents are substantially identical with claim 8 of Patent No. 564,-586, it follows necessarily that the invention of 32
claims 5 and 35 of the patent in suit was previously patented by the prior English, French and German patents above referred to. The decision of this Court in *Miller* v. *Eagle Mfg. Co.*, 151 U. S., 186, 198, is conclusive upon this proposition. In the Miller case this Court held upon a review of the authorities "that no patent can issue for *an invention* covered by a former patent, especially to the same patentee, *although the terms of the claims may differ;* that the second patent, although containing a *broader claim*, more generic in its character than the specific claims contained in the prior patent, is also void," and that, under the rule announced in the authorities referred to by the Court, the proposi- 33
tion "whether this invention shall be protected in *part* of its features by one patent, and as to the *rest* by another, or shall be completely protected by a single patent is a matter which concerns solely the Patent Office and the inventor" cannot be sustained. Clearly, therefore [illegible]nce Patent No. 564,586 was not issued until July [illegible]1896, subsequently to the issue on February 19, 1895, of the patent in suit, claim 8 of Patent No. 564,586 is void because the invention of that claim was previously patented by claims 5 and 35 of the patent in suit, "*although the terms of the claims may*

differ." The logical and necessary consequence is that the invention covered by claims 5 and 35 of the patent in suit was previously patented in England, France and Germany, since claims 9 of the English and French patents are identical with claim 8 of Patent No. 564,586, and the patent in suit expired with the expiration of the legal terms of the prior foreign patents. Moreover, if the decision of this Court in *Siemens' Admr.* v. *Sellers*, 123 U. S., 276, that under the statute limiting the term of a home patent by a prior foreign patent, a patent "cannot be construed as running partly from one date and partly from another. This would be productive of endless confusion," is not a correct statement of law, and it is submitted that it is a correct statement of law; and if § 4887 of the Revised Statutes is to be arbitrarily construed, in the face of the clear and imperative provisions thereof, as applying to limit the term of a home patent by the term of a prior foreign patent only when the *principal invention* of the home patent is described and claimed in the prior foreign patent, and as not applying when, in accordance with the express provision of the statute, the home patent is granted for the invention described and claimed in the prior foreign patent, or, in other words, when the invention described and claimed in the prior foreign patent is also described and claimed in the home patent, then clearly the *principal invention* embodied in claims 5 and 35 of the patent in suit was previously patented within that interpretation of the statute by the prior English, French and German patents above referred to.

It is respectfully submitted that in order to sustain the patent in suit, both the Circuit Court and Circuit Court of Appeals arbitrarily set aside the clear provision of § 4887 as to the limitation of a home patent by a prior foreign patent and the clear provision of § 4886 as to public use or sale in this country for more than two years prior to the filing of an applica-

tion for a patent, and, without any support in 37
the statutes or assigning any reason derivable from the statutes, have held that the statutes did not apply to the patent in suit, thus leaving the law upon these subjects and patents coming under the provisions of such law in a state of endless confusion.

Referring to the opinion of the Circuit Court of Appeals in the prior suit (Record, p. 74), it will be seen that that Court said:

> "The specifications in that application (for 564,586) were full enough to warrant the making of the claims here in controversy (5 and 35); at any time the application might have been amended by adding such claims, 88
> and in our opinion it is immaterial that instead of thus amending it he took the broader claims on another application filed while the first was pending. The second may fairly be considered a continuation of the first, and thus Berliner's application antedates the public use."

It is respectfully submitted that this holding of the Circuit Court of Appeals, which was necessary in order to defeat the defense of prior public use, proceeded upon the proposition that the invention of the claims in controversy (5 and 35) was the invention illustrated in Fig. 10, described in the specification and claimed in claim 8 of Patent No. 564,586. 39
Although the terms of claim 8 and of claims 5 and 35 may differ, they all protected one and the same invention, to wit, the machine shown in Fig. 10 of Patent No 564,586. Claim 8 clearly covers a machine constructed to operate as the machine shown in Fig. 10 operates, and the main features of Berliner's invention covered by claim 8 are embodied, according to Berliner's express statement, in the machine shown in Fig. 10. Claim 8 is broad enough to cover not only the modified machine shown in Fig. 10, but also the machine shown in Fig. 1; but, conceding that claim 8 and claims 5 and 35 differ as

40 to their terms and protect *different features of one and the same machine*, it is perfectly clear that all three claims protect *one and the same invention*, namely, the machine shown in Fig. 10. "*The machine is the thing patented*" (Wilson *v.* Rousseau, 4 How., 646, 683). As claims 9 of the prior English and French patents are identical with said claim 8, there is no escape from the conclusion that the invention, and the principal invention, of claims 5 and 35 was previously patented by the English, French and German patents.

Complainant's counsel, in the Circuit Court of Appeals, while admitting that the word "traveling" used in claims 1, 2, 3, 7 and 13 of Patent No.
41 564,586 referred to the travel of the surface of a tablet due to rotation only, contended that in claim 8 the word "traveling" has a different meaning and refers not to "a copy of such record in solid resisting material," but to the support 7 of Fig. 1 of Patent No. 564,586.

Referring to claim 8 of Patent No. 564,586 and to claims 9 of the English and French patents, it is clear that the combination of those claims consists of the diaphragm, which is the "sonorous body", of the stylus which is pivoted and which is controlled by and controls the diaphragm, and *either* a support adapted to carry a phonautographic record-sheet, *or*, "a copy of such
42 record in solid resisting material," traveling in the plane of vibration of the point or end of the stylus, substantially as described. The word "traveling" means "rotating" and modifies *either* "a support adapted to carry a phonautographic record-sheet," *or*, "a copy of such record in solid resisting material." In Fig. 10 of Patent No. 564,586, the word "traveling" can have no meaning other than "rotating," since the only way in which the copy of the record in solid resisting material of Fig. 10 can travel is by rotating. The contention of complainant's counsel that the word "traveling" modifies the word "support" and that the word "sup-

port" refers to the support 7 shown in Fig. 1 of the home patent No. 564,586 and in Fig. 8 of the English patent is untenable. The support mentioned in claim 8 of the home patent is "a support adapted to carry a phonautogramic recording-surface" which is the same as "a support adapted to carry a phonautographic record-sheet" in claim 9 of the English patent. That the support 7 is not a support adapted to carry a phonautogramic recording-surface, *a deposit of ink*, is clear from a reading of the specification of the English and home patents. The support 7 serves as a bearing for the bevel-gear 9 (home patent, p. 2, lines 43-44; English patent, p. 5, lines 50-51). The specifications unmistakably describe what is meant by a support adapted to carry a phonautogramic recording-surface or record-sheet. In the specifications (home patent, p. 1, lines 62-67; English patent, p. 5, lines 24-26) Berliner describes specifically what is meant by a support adapted to carry the phonautographic recording-surface. He says:

> "I have further improved the process by using a transparent plate as a *support* for the non-resisting medium. This plate is, therefore, made either of glass or some other like substance whereby I secure several important advantages."

That the non-resisting medium forms the recording-surface or record-sheet is also specifically described by Berliner (home patent, p. 1, lines 88-91; English patent, p. 5, lines 36-38) as follows:

> "In my improved process, I employ a layer of semi-fluid ink or paint, of such consistency and thickness that it will neither subside or flow spontaneously."

The support referred to in claim 8 of the home patent and in claims 9 of the English and French patents is, therefore, the support 13 shown in Fig. 1

of the home patent and Fig. 8 of the English patent, being a plate of glass or other like transparent material adapted to carry the recording medium, a layer of a semi-fluid ink or paint. The word "traveling" is used in claims 1, 4, 5, 9, 10 and 14 of the English patent and in claims 1, 2, 3, 4, 7, 8 and 13 of the home patent. Reference to these claims shows beyond all question that the support mentioned in claim 8 of the home patent and in claims 9 of the English and French patents is the traveling plate, the traveling support, the traveling plate of glass, the traveling support of glass, the rotating disc of glass, &c. In the claims referred to, as well as in the description of the patents, it is distinctly stated that a deposit of ink or like material is put upon the surface of the traveling plate, disc or support and removed therefrom by and in accordance with sound vibrations. Hence it is clear that the word "traveling" used in claim 8 of the home patent and claims 9 of the English and French patents modifies, and the punctuation shows that it modifies, either "a support adapted to carry a phonautogramic recording-surface," or, "a copy of such record in solid resisting material," and that the word "traveling" means "rotating" and that the copy of the record in solid resisting material shown in Fig. 10 can travel only by rotating.

Third.—WHETHER UNDER A PROPER CONSTRUCTION OF SECTION 4886 OF THE REVISED STATUTES AS IT EXISTED WHEN THE PATENT IN SUIT WAS GRANTED ON FEBRUARY 19, 1895, THE PUBLIC USE OR SALE IN THIS COUNTRY FOR MORE THAN TWO YEARS PRIOR TO THE APPLICATION FOR A PATENT REFERS TO THE DATE OF THE APPLICATION FOR THE PATENT IN WHICH THE INVENTION IN QUESTION IS CLAIMED AS WELL AS DESCRIBED OR TO THE DATE OF ANY AP-

PLICATION FOR A PATENT IN WHICH THE INVENTION 49
IN QUESTION IS DESCRIBED BUT NOT CLAIMED.

(*This question is discussed under Point Four, Subdivision* (e), *p. 94, of petitioner's brief in the Circuit Court of Appeals.*)

As above pointed out under Point Second, the Circuit Court of Appeals in the prior suit and in this suit overruled the defenses of public use in this country for more than two years prior to the date of the application for the patent in suit upon the ground that the subject matter of the claims, 5 and 35 in suit of the patent in suit, was described, but not claimed, in the application for 50
Patent No. 564,586, filed November 7, 1887. The application for the patent in suit was filed March 30, 1892. The defense of prior public use in the prior suit was based upon a public use before the Franklin Institute on May 16, 1888. The defense of prior public use in this suit was based upon a public use in the City of New York during the week preceding August 18, 1888, and upon the full and complete publication and disclosure of such use in the *Electrical World* for August 18, 1888, as well as upon the public use before the Franklin Institute on May 16, 1888. If, under a proper construction of § 4886, the date of the application for the patent in suit, March 30, 1892, is the date to be 51
considered, then the prior public uses referred to occurred more than two years prior to the filing of the application and the patent in suit, so far as the claims in controversy, 5 and 35, are concerned, is void. If, however, the date of the filing of the application for Patent No. 564,586, on November 7, 1887, is the date to be considered, then the prior public uses relied upon occurred subsequently to that date, November 7, 1887. In discussing this point it must be assumed, *contrary to the fact*, that the invention protected by claims 5 and 35 of the

52 patent in suit is not the invention or a feature of the invention protected by claim 8 of Patent No. 564,586 and claims 9 of the English and French patents discussed under Point Second, because, if the inventions are the same, the patent in suit and claims 5 and 35 expired with the expiration of the legal terms of the prior English, French and German patents above referred to under Point Second, and the discussion of this point in such case is unnecessary.

Referring to Judge Hazel's opinion in the prior suit, it will be seen that Judge Hazel, dealing with the claims 5 and 35 in controversy, and with the subject matter of the patent in suit and of the ap-
53 plication for Patent No. 564,586, said (Record, p. 71):

> "As already appears, the patent in suit was issued upon a later application than Patent No. 564,586. Why the broad claims of the former were not made a part of the earlier application and specification does not appear."

The Circuit Court of Appeals, affirming Judge Hazel's decree in the prior suit, overruled the defense of prior public use made in the prior suit, not upon the ground relied upon by Judge Hazel that the public use was experimental, but upon the ground stated in the opinion of the Circuit Court of Appeals,
54 as follows (Record, p. 74):

> "The specifications in that application (for 564,586) were full enough to warrant the making of the claims here in controversy; at any time the application might have been amended by adding such claims, and in our opinion it is immaterial that instead of thus amending it, he took the broader claims on another application filed while the first was pending."

The application for the patent in suit was not filed as a division of the application filed November 7, 1887 (see patent in suit, p. 472). It also appears

from the findings of Judge Hazel and the Circuit 55
Court of Appeals in the prior suit, in evidence in this suit (Record, pp. 71 and 74), that the claims here in controversy were never made upon the prior application. Such findings were in accordance with the file-wrappers and contents of the patent in suit and of Patent No. 564,586 (see record on appeal in prior suit, pp. 157, 275; 145 Fed., 350). It is the fact, and there was no evidence in the prior suit or in this suit to the contrary, that the special features of the claims here in controversy, 5 and 35, as construed by the Circuit Court of Appeals, were first made the basis of an application for a patent and claimed in the application for the patent in suit, filed March 30, 1892.

Upon the question of proof of public use, it is not 56
necessary to do more than to refer the Court to the article in the *Electrical World* for August 18, 1888 (Record, p. 274), and to the affidavits of Martin and Wetzler (Record, pp. 191, 194), to show that the invention of claims 5 and 35 was publicly used in the City of New York during the week preceding August 18, 1888, and fully described in the *Electrical World* for that date, together with a perfect illustration and description of the machine operating according to the invention of those claims. Moreover, the public use before the Franklin Institute, relied upon in the prior suit, is shown by the testimony of Mr. Berliner (Record, pp. 230–242, especially 57
Q. 13 and Q. 14, p. 232), by Berliner's lecture delivered before the Franklin Institute on May 16, 1888 (Record, pp. 245–273, especially pp. 268–270 and illustration on p. 269 of reproducing apparatus, May, 1888) and by the article in the *Electrical World* for November 12, 1887 (Record, pp. 243–244, especially the last two paragraphs of first column on p. 244, and first two paragraphs of second column on p. 244).

If the public use before the Franklin Institute was experimental, and the Circuit Court of Appeals refused to hold that it was, the public use in the

City of New York during the week preceding August 18, 1888 was unquestionably a public use within the meaning of § 4886. Since this public use occurred more than two years prior to the filing of the application by Berliner for the patent in suit and more than two years before Berliner filed any application claiming the subject matter of the claims here in controversy, 5 and 35, assuming that the subject matter of claims 5 and 35 is not the invention of claim 8 of Patent No. 564, 586 and of claims 9 of the English and French patents above mentioned, it is respectfully submitted that the defense of a public use in this country more than two years prior to the filing of the application by Berliner for a patent for the invention of claims 5 and 35 is conclusively established within the meaning of § 4886 of the Revised Statutes. Of course, in the Circuit Court and in the Circuit Court of Appeals this petitioner was precluded by the prior decision of the Circuit Court of Appeals from arguing this point, but it was specifically set forth in the assignment of errors (see errors assigned, Nos. 24 and 25, Record, p. 537) in order that the question might be raised and passed upon by this Court.

As will be seen from an examination of the authorities collated and cited by the Circuit Court of Appeals in *Hayes-Young Co.* v. *St. Louis Co.*, 137 Fed., 80, 82, 83, and *Western Elec. Co.* v. *Sperry Co.*, 58 Fed., 186, 191, 192, in cases where a second application has been held to be a continuation of a first application and to relate back to the date of the first application, it has appeared (1) that the invention described and claimed in the second application was claimed as well as described in the first application; (2) that special circumstances existed connecting the second application with the first application and showing that the second application was in fact, and was intended to be, a continuation of the first application, and (3) that between the filing of the first application and the filing of the second application the applicant had not abandoned

the invention described and claimed in the second application or done anything estopping him from making claim thereto. In the case at bar, however, it appears (1) that Berliner, in his application filed November 7, 1887, for Patent No. 564,586, described the subject matter of claims 5 and 35 of the patent in suit, according to the construction of these claims heretofore made by the courts, as a mere modification, retaining the main features of the invention described and claimed in Patent No. 564,586, but made no claim therefor; (2) that *between* the filing of the first application for Patent No. 564,586 on November 7, 1887, and the filing of the second application for the patent in suit on March 30, 1892, Berliner, as appears from the following Fourth Point of this petition and from Point Six, page 115, of petitioner's brief in the Circuit Court of Appeals, as the assignee of Werner Suess, asserted under oath, in an application filed May 5, 1891, for Letters Patent of Canada, that the invention held by the Circuit Court and the Circuit Court of Appeals to be the invention covered by claims 5 and 35 of the patent in suit, and illustrated by Fig. 10 of Patent No. 564,586, was the sole invention of Werner Suess; and (3) that no circumstance appears connecting the second application for the patent in suit with the first application for No. 564,586, or showing that the second application was in any sense whatever a continuation of the first application. *Two years' prior public use and abandonment are clear* (*Western Elec. Co.* v. *Sperry Co.*, 58 Fed., 186, 191, 192). Fig. 3 of the patent in suit is a machine of entirely different construction from Fig. 10 of Patent No. 564,586, and shows as a part thereof the reproducer illustrated in Figs. 6 and 7, which Berliner, in the patent in suit (p. 1, lines 23–37), stated is one of the essential features of the invention of the patent in suit. Excepting the reproducer, the machine shown in Fig. 3 of the patent in suit is the gramophone, which, in the Canadian patent, Berliner described

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64 and claimed broadly as the invention of Suess. The inventions described and claimed in the first application are essentially different from the inventions described and claimed in the second application for the patent in suit, as a comparison of the two patents will show. Claims 5 and 35 of the patent in suit when properly construed, as pointed out under points seven and twelve (pp. 130, 187) of petitioner's brief in the Circuit Court of Appeals, are limited by Berliner's improvements in the details of construction of his reproducer illustrated in Figs. 6 and 7 of the patent in suit; if, however, Judges Hazel and Townsend and the Circuit Court of Appeals were right in holding that the invention of
65 claims 5 and 35 of the patent in suit is the invention illustrated in Fig. 10 and described at page 4, lines 90–117 of Patent No. 564,586, in such case it necessarily follows that the invention of claims 5 and 35 of the patent in suit is a mere modification of the principal invention described in claim 8 of Patent No. 564,586 and in claims 9 of the prior English and French patents of November 8, 1887, above considered under Point Two of this petition and under Point Four (p. 90) of petitioner's brief in the Circuit Court of Appeals, and that claims 5 and 35 expired on November 8, 1901, with the expiration of the English patent, and on November 8, 1902, with the expiration of the French patent, long prior to the
66 commencement of this suit in 1904. *The point here, however, is that two years prior, public use and abandonment are clearly proven.*

Fourth.—WHETHER WHERE A PERSON, AS THE ASSIGNEE OF ANOTHER, FIRST APPLIES IN A FOREIGN COUNTRY FOR A PATENT FOR AN INVENTION, AND UPON SUCH APPLICATION SECURES IN THE FOREIGN COUNTRY A PATENT BROADLY DESCRIBING AND CLAIMING THE INVENTION, AS THE INVENTION OF ANOTHER, SUCH PERSON CAN, AFTER THE FILING OF SUCH APPLICATION IN

THE FOREIGN COUNTRY, FILE AN APPLICATION AND 67
SECURE A PATENT IN THIS COUNTRY FOR THE SAME INVENTION AS HIS OWN INVENTION. IN OTHER WORDS, UNDER SUCH CIRCUMSTANCES, CAN THE CLAIMS OF THE HOME PATENT BE CONSTRUED TO COVER THE INVENTION DESCRIBED AND CLAIMED IN THE PRIOR FOREIGN PATENT.

(*This question is discussed under Point Six, p. 115, of petitioner's brief in the Circuit Court of Appeals.*)

This question arises upon the evidence showing that on May 5, 1891, Berliner, as the assignee 68
of Werner Suess, filed an application in Canada upon which, on February 11, 1893, Letters Patent of Canada, No. 41,901, were granted (Record, p. 169, fol. 507). The Canadian patent is set forth in the record at pages 155–168. By stipulation (Record, p. 541) the drawings of the Canadian patent are identical with the drawings of U. S. Patent No. 427,279, of May 6, 1890, to Berliner as the assignee of said Suess, which latter patent is to be found in the record at page 446. The file wrapper and contents, including the assignment, petition, powers of attorney and proceedings in the Patent Office of the Canadian patent, are to be found in the record at pages 169–175. The petition (Record, p. 170) was 69
signed by Berliner, who asserted therein that Werner Suess had "invented new and useful improvements in gramophones, not known or used by others before his invention thereof," and that Berliner, by an assignment, "acquired the right of obtaining a patent from Werner Suess aforesaid for the said invention," and "prays that a patent may be granted to him as the assignee of the said Werner Suess for the said invention."

That the Canadian patent describes and broadly claims the invention covered by the claims, 5 and 35, of the patent in suit, here in controversy is fully

70 shown in petitioner's brief (Point Six, pp. 115–130) in the Circuit Court of Appeals, a copy whereof is hereto annexed. Referring to the opinion of Judge Townsend, it appears that Judge Townsend found that the Canadian patent "discloses and broadly claims the invention covered by the claims here in suit" (Record, p. 324, fol. 971) and that "the Canadian patent in terms describes and claims the broad, generic invention of Berliner covered by the claims here in suit" (Record, p. 325, fol. 973). With this finding of Judge Townsend the Circuit Court of Appeals agreed, as will be seen from the oral statement of that court made when affirming upon the argument Judge Townsend's decree. The Circuit Court
71 of Appeals said:

> "Of course, if the Canadian patent expired the United States patent expired at the same time."

(See *infra*, Point Thirteen, p. of this petition.) In view of this Canadian patent which was not in evidence in the prior suit, this petitioner contends that the construction given to the claims 5 and 35 in the prior suit was incorrect, not warranted by the specification of the patent in suit, and unreasonable by reason of the fact that in the Canadian patent Berliner, as the assignee of Suess, had previously described and claimed the broad invention which in
72 the prior suit, in the absence of the Canadian patent, the courts had construed the claims 5 and 33, in controversy, to cover. As this question is of such great importance, and as it has been fully treated under Point Six (pp. 115–130) of petitioner's brief in the Circuit Court of Appeals hereto annexed, and as both the Circuit Court and the Circuit Court of Appeals have squarely held that the Canadian patent describes and broadly claims the invention of the claims 5 and 35, here in suit, as construed by the courts in the prior suit and in this suit, but little needs to be said further in this petition. It is desired only to point out that in *Matheson* v. *Campbell*,

78 Fed., 910, 917, the Circuit Court of Appeals for the 73
Second Circuit said:

> "It must be *sound law*, as it is reasonable *common sense* to hold that the *tests of prime importance* in a suit for infringement are those which the *patent itself* prescribes. The inventor certainly may be assumed to know what it is that he has invented. If any one is able to describe the product of his inventive skill, it is himself. He surely knows the earmarks of the thing he seeks to patent. * * *"

Referring to the patent in suit, it will be seen that Berliner describes all the features of his invention at page 1, lines 17-36 thereof, as follows:

> "*One feature* of my invention has reference to *improvements* in the *method of recording sound* by tracing upon a fatty film deposited upon a metallic surface, undulatory lines, corresponding to sound waves, and then etching such lines in the metal base, or, as it is now commonly called, the record tablet; while the *other features* of my invention have reference to the *construction of the details of both the recorder and the reproducer of the gramophone.* Each of these *features of improvement* are designed to overcome certain difficulties, and to avoid certain imperfections *heretofore met with in the operation of the gramophone.* These difficulties and imperfections, and the manner in which they are avoided, will be particularly pointed out in the following description with reference to the accompanying drawings, in which——" 74 75

This is the patentee's express declaration of the features of improvements contained in the patent, and no other declaration whatever of any other feature of improvements is to be found elsewhere in the patent. In the face of this express and positive declaration of the patentee as to what are the features of his invention, the Circuit Court and the Circuit Court of Appeals have held not only that the patent included other features not enumerated

76 by Berliner, but have gone even further and held that the features which Berliner did enumerate as the features of his invention are not the principal features of his invention, but are mere minor details; and finally the Circuit Court and the Circuit Court of Appeals reached the unreasonable and the untenable conclusion that the claims, 5 and 35, here in controversy, were not to be limited in any way by the features which Berliner in the specification pointed out as the principal features of his invention, but were to be broadly construed so as to cover the invention which Berliner had previously broadly described and claimed in the Canadian patent as the invention of Suess.

77 It is, therefore, respectfully submitted that the broad construction given to claims 5 and 35 in the prior suit and in this suit is a construction which renders claims 5 and 35 invalid, because anticipated by Suess in the Canadian patent; that such broad construction of claims 5 and 35 is, upon the facts stated, unreasonable and untenable; and that claims 5 and 35, when properly and reasonably construed in view of the Canadian patent and of the express statement of Berliner in the patent in suit as to the features of his invention, must be limited, as argued under Point Six of petitioner's brief in the Circuit Court of Appeals, by Berliner's improvements in the details of construction of his reproducer.

78 In his lecture before the Franklin Institute Berliner said (Record, p. 266):

> "I will now describe the *most important* apparatus of the *gramophone*—the *recorder*."

Equally important with the recorder is, of course, the reproducer, which, as Berliner stated in the Franklin Institute lecture (Record, p. 268),

> "is constructed on precisely the same principles as the recorder."

The recorder and the reproducer are not minor details, therefore, of the invention of the patent in

suit, but constitute, as Berliner says, the principal features of the invention of the patent in suit. A proper construction of claims 5 and 35 must include the features of construction of the reproducer, whereby the reproducer is permitted to vibrate laterally in the manner described in the specification of the patent. As pointed out under Point Six, subdivision (*i*), at page 127 of petitioner's brief in the Circuit Court of Appeals, petitioner used the reproducer of the Suess gramophone of the Canadian patent, which reproducer has none of the features of the invention of the patent in suit. Petitioner's machines embody the invention of Suess, only, and unless claims 5 and 35 can be construed so as to cover broadly the invention of the Canadian patent, they cannot be construed so as to cover petitioner's machines. 79 80

As this defense was not met by the opinion of Judge Townsend in the Circuit Court, as it was not met by the oral statement in the Circuit Court of Appeals, and as it is clearly conclusive in reason, this Court is respectfully requested carefully to consider the argument made in support thereof under Point Six of petitioner's brief in the Circuit Court of Appeals hereto annexed, and to pass upon the question whether it is possible to hold that claims 5 and 35 can reasonably and properly be construed so as to cover an invention which the patentee, Berliner, had previously asserted in the most solemn and irrevocable manner in the Canadian patent, was the invention of Suess; and, if it is possible so to hold, whether claims 5 and 35 are not invalid, because before filing his application for the patent in suit Berliner asserted in the Canadian patent that the invention thereof was the invention of Suess, and thereby became estopped from thereafter claiming the invention as his own. 81

82 **Fifth.**—WHETHER, BY ELECTING TO CLAIM IN A FOREIGN COUNTRY AN INVENTION AS THE INVENTION OF ANOTHER UPON AN APPLICATION RESULTING IN A PATENT, THE APPLICANT FOR SUCH FOREIGN PATENT DOES NOT ABANDON ANY RIGHT WHICH HE, HIMSELF, MAY HAVE HAD SUBSEQUENTLY TO CLAIM THE SAME INVENTION AS HIS OWN IN THIS COUNTRY AND DOES NOT BECOME ESTOPPED FROM SO DOING.

(*This question is discussed under Point Seven, page 130, of petitioner's brief in the Circuit Court of Appeals.*)

83 This question arises upon the evidence showing that on May 5, 1891, Berliner, as the assignee of Werner Suess, filed an application in Canada upon which, on February 11, 1893, Letters Patent of Canada No. 41,901, were granted (Record, p. 169, fol. 507). The application for the patent in suit was not filed until March 30, 1892. Judge Townsend and the Circuit Court of Appeals held that the invention of claims 5 and 35 of the patent in suit, as construed by them, was the invention described and broadly claimed by Berliner in the Canadian patent as the invention of Suess. The facts relating to this point are fully set forth under Points Seven, Twelve and Six (pp. 130,
84 187, 115) of petitioner's brief in the Circuit Court of Appeals. Assuming that claims 5 and 35 of the patent in suit are not to be limited by Berliner's improvements in the details of construction of his reproducer, and that when correctly construed they cover the invention described and broadly claimed by Berliner in the Canadian patent as the invention of Suess, it is clear that Berliner irrevocably abandoned all claim to the invention when he filed the application for the Canadian patent as the assignee of Suess, nearly a year before he filed the application for the patent in suit, and that when he filed the ap-

plication for the patent in suit, he was estopped from 85
claiming as his own the invention, which, in the Canadian application, he alleged under oath to be the invention of Suess. Neither Judge Townsend nor the Circuit Court of Appeals has shown how claims 5 and 35 of the patent in suit can, under the facts disclosed, be construed to cover the identical invention described and broadly claimed by Berliner in the Canadian patent as the invention of Suess; nevertheless, they have so construed the claims. Neither Judge Townsend nor the Circuit Court of Appeals has explained how, under the circumstances, abandonment of the invention by Berliner and estoppel are not clearly made out. It is respectfully submitted that the evidence of the Canadian patent 86
conclusively shows (1) that the construction given to claims 5 and 35 of the patent in suit is incorrect, and that the finding of infringement by defendant is incorrect as a consequence; and (2) that if the construction given to the claims be correct abandonment of the invention and estoppel are clearly proved.

Sixth.—WHETHER A HOME PATENT EXPIRES WITH THE EXPIRATION OF THE SIX YEAR TERM OF A PRIOR CANADIAN PATENT FOR THE SAME INVENTION, WHERE THE RIGHT TO PROLONG THE TERM OF THE CANADIAN PATENT FOR A FURTHER TERM OR TERMS BY THE PAY- 87
MENT OF A FURTHER FEE OR FEES HAS NOT BEEN EXERCISED, AND THE CANADIAN PATENT HAS BEEN PERMITTED TO EXPIRE AT THE EXPIRATION OF THE SIX YEAR TERM.

(*This question is discussed under Point Eight, page 145, of petitioner's brief in the Circuit Court of Appeals.*)

This important question of law arises upon the evidence showing that the Canadian Patent

88 No. 41,901 of February 11, 1893, was granted to Berliner as the assignee of Suess, prior to the granting of the patent in suit on February 19, 1895, and upon the holding of Judge Townsend and the Circuit Court of Appeals, that the invention of claims 5 and 35 of the patent in suit is described and broadly claimed in the Canadian patent. The authorities in support of the proposition that the patent in suit expired with the expiration of the six year term of the Canadian patent on February 19, 1895, long before this suit was begun, are collated and discussed under Point Eight of petitioner's brief in the Circuit Court of Appeals. It is respectfully submitted that the decision of
89 this court in *Commercial Mfg Co.* v. *Fairbank Co.*, 135 U. S., 156, considered at pages 164 and 59 of petitioner's brief in the Circuit Court of Appeals, is conclusive in support of the proposition. It is also respectfully submitted that the clear meaning and purpose of the statute was that a home patent should expire with a prior foreign patent in every case where the prior foreign patent expires by lapse of time and does not lapse or become forfeited through the breach of a condition subsequent, such as the non-payment of taxes or failure to work the patent and the like.

90 **Seventh.**—WHETHER THE PATENT IN SUIT WAS NOT ANTICIPATED BY ENGLISH PATENT NO. 1644 OF 1878, TO EDISON, AS TO CLAIMS 5 AND 35, IF THOSE CLAIMS ARE TO BE BROADLY CONSTRUED AND NOT LIMITED BY THE SPECIAL FORM OF REPRODUCER SHOWN IN FIGURES 6 AND 7.

(*This question is discussed under Point Ten, page 176, of petitioner's brief in the Circuit Court of Appeals.*)

This valid defense was not even considered by Judge Townsend or by the Circuit Court of Appeals

in the case at bar, because the Edison English Pat- 91
eut No. 1644 of 1878 was contained in the record of the prior suit. It was used, however, for a specific purpose in the prior suit, and the defense raised in this suit was in no way presented to the Court in the prior suit or considered or passed upon by the Court in the prior suit. Under the decision of this Court in *Mast, Foos Co.* v. *Stover Mfg. Co.*, 177 U. S., 485, the defense based upon that patent in this suit should have been considered and decided according to its merits.

Eighth.– WHETHER THE PATENT IN SUIT WAS NOT ANTICIPATED BY PATENT NO. 341,214, OF MAY 4, 92
1886, TO BELL & TAINTER.

This defense was one of the defenses chiefly relied upon in the prior suit of these complainants against the American Graphophone Company, as appears from Judge Hazel's opinion set forth in the record in this suit (p. 63). The Bell & Tainter patent is to be found at page 387 of the record, and the corresponding English patent is to be found at page 488 of the record. Assignment of Errors Nos. 10, 26 and 27 (Record, p. 534) raise the question here presented, which, of course, was not open to petitioner in the Circuit Court of Appeals and *never* will be open to petitioner unless the writ 93
of *certiorari* hereby prayed for is granted.

As appears from claims 5 and 35 of the patent in suit, the invention in controversy consists of a stylus "free to be vibrated and propelled" by the record. This freedom of the stylus is the result of the loose mounting of the reproducer arm, and its practical embodiment is, and has always been, in the employment of a universal joint for connecting the reproducer arm with its support.

94 Bell & Tainter describe this construction as the fourth part of their invention, saying, in U. S. Patent No. 341,214 (p. 391, line 84),

> "The invention consists fourthly, in loosely mounting the reproducing-style so that it can readily be guided by the record."

In the corresponding English Patent No. 6027, of 1886, Bell & Tainter make the same statement and add (p. 489, line 24),

> "This may be accomplished in different ways as, for example, by mounting the head of the reproducing instrument upon a *joint* which admits of a *lateral* movement."

95 In U. S. Patent No. 341,214, it is said, immediately after the part above quoted (p. 391, line 86),

> "Preferably the reproducing-style, or rather what may be called the 'head' of the reproducing instrument, is mounted on an *universal joint*, and the style is pressed against the record by the yielding pressure of a spring or weight."

Both the United States patent (p. 392, line 1) and the English patent (p. 489, line 50) state that the reproducing style mounted as just explained may be usefully employed in connection with records of various forms. Disc records are described in both patents and the vertical and lateral undulations of
96 the record groove was described by Edison at the time of the invention of all sound recording and reproducing instruments in English Patent No. 1644 of 1878 (p. 473, line 53), and in U. S. Patent No. 200,521, of February 19, 1878 (p. 336, top second column). The claims, 5 and 35, of the patent in suit are for a stylus free to be propelled (laterally, of course), by the record, and claims 19 of the Bell & Tainter United States and English patents read as follows:

> "19. The combination with the reproducing style of a mounting therefor, which

> leaves said style *free to move laterally* and thereby adjust itself automatically to a sound record, substantially as described." 97

Clearly Bell & Tainter describe the precise mounting of the reproducing stylus described in the claims 5 and 35 of the patent in suit. In each case the stylus is both vibrated and moved laterally by the record-groove. The use of a swinging arm, mounted on a universal joint, which permits the record-groove to move the stylus all the way across the face of the record was, according to the express statement of Berliner, the invention of Werner Suess. Berliner not only stated under oath in Canadian Patent No. 41,901, of February 11, 1893, that 98

> "11. In an apparatus for reproducing sounds from a rotating record-tablet, a reproducing stylus mounted to have a free movement over the surface of the record-tablet. substantially as described,"

was the invention of Suess (Record, p. 167); but Berliner, in his lecture before the Franklin Institute on May 16, 1888, also said that Suess (p. 270)

> " suggested to mount the sounder on a pivot at some distance from the disc and then let the reproducing-groove guide the sounder across the disc over an arc of flat amplitude. This happy idea is embodied in the present apparatus, and is a very ingenious adaptation indeed." 99

It is very clear that the *swinging arm* shown in Fig. 3 of the patent in suit and described in the specification thereof, if not the invention of Edison (English Patent No. 1644 of 1878, p. 479, lines 48–53), was the invention of Suess. The mounting of the reproducing stylus so that it is free to be vibrated and propelled by the record-groove was clearly disclosed by Bell & Tainter. Claims 5 and 35 of the patent in suit are not limited by a swinging arm capable of permitting the record-groove to move the stylus entirely across the face of the record, and

100 there is no suggestion in the claims that the vibrating and propelling of the stylus is to be accomplished without the aid of a feed-screw. The claims are for a stylus free to be vibrated and propelled by the record groove, and such stylus was clearly described in the prior United States and English patents to Bell & Tainter. Even before Suess, Edison, as above stated, in English Patent No. 1644 of 1878, disclosed in Fig. 34 and described at page 8, line 48, a stylus carried at the end of a swinging-arm and free to be vibrated and propelled by the record-groove. This was claimed by Edison in claim 1 of the patent, which reads as follows (p. 482):

101 "FIRST.—The combination with the diaphragm and point of a flat receiving surface and means for revolving the receiving surface, and *causing the point to follow a volute or spiral line*, substantially as represented in Figs. 1, 2, 6, 7, 8, 9, 10 and 34."

Thus Edison distinctly pointed out and claimed, as *equivalents*, the causing of the stylus to follow the record groove, either by propelling the stylus across the face of the record by the walls of the record groove *alone* and without mechanical assistance, *as in Fig. 34*, or by similarly propelling the stylus with the assistance of a feed-screw, as in Figs. 1 and 2, for example.

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Ninth.—WHETHER CLAIMS 5 AND 35 OF PATENT IN SUIT ARE NOT INVALID AS BEING CLAIMS FOR THE FUNCTION OF A MACHINE.

This question was raised by Assignment of Errors, Nos. 30 and 31 (Record, p. 534). Claims 5 and 35 of the patent in suit read as follows:

"5. The method of reproducing sounds from a record of the same which consists in vibrating a stylus and propelling the same

along the record by and in accordance with 103
the said record, substantially as described.

"35. In a sound reproducing apparatus consisting of a traveling tablet having a sound record formed thereon and a reproducing stylus shaped for engagement with said record and *free to be vibrated and propelled* by the same, substantially as described."

Judge Wallace stated, at the opening of his opinion, in the Circuit Court of Appeals, in the contempt proceedings in this suit, to review which contempt proceedings a petition for writ of *certiorari* is presented herewith, that claim 5 "covers merely the function of the machine" and that "it is more than doubtful whether the claim is not void upon 104
its face" (see record certified in support of petition for writ of *certiorari* to review contempt proceedings).

The decision of this Court in *Westinghouse* v. *Boyden Co.*, 170 U. S., 537, 554, and 70 Fed., 816, 829, is sufficient authority to show that claims 5 and 35 are invalid as being for the function of a machine. In that case it was held that if, in a claim for a combination of mechanical elements, *one* of the elements be properly interpreted as a function, the entire claim would be void, since it would be open to the objection, held in several cases to be fatal, that the mere function of a machine cannot be patented. Clearly claim 5 describes nothing but 105
the function of the machine illustrated in Fig. 3. Claim 35 includes as an element a stylus "free to be vibrated and propelled" by the record. This function is clearly the function of the stylus shown in Fig 3 of the patent in suit. Claim 35 cannot be limited and held valid by construing the stylus "free to be vibrated and propelled" as meaning a stylus mounted upon a swinging arm, such as the swinging arm shown in Fig. 3, because, as Berliner

stated in his lecture before the Franklin Institute
106 (p. 270, fol. 809) and in the Canadian patent (p. 155), the swinging arm was the invention of Suess.

Tenth.—WHETHER CLAIM 35 OF THE PATENT IN SUIT IS NOT VOID AS BEING INDEFINITE, MEANINGLESS AND CLAIMING NOTHING.

This question is raised by Assignment of Error No. 31 (p. 534). Claim 35 reads as follows:

> "35. *In a sound reproducing apparatus* consisting of a travelling tablet having a sound record formed thereon and a repro-
107 ducing stylus shaped for engagement with said record and free to be vibrated and propelled by the same, substantially as described."

All that claim 35 does is to describe a sound reproducing apparatus in which *something not stated* is to be claimed. Under the decision of this Court in *Merrill* v. *Yeomans*, 94 U. S., 568, 573:

> "The public should not be deprived of rights supposed to belong to it without being clearly told what *it is* that limits these rights."

108 In Merrill's case the patentee had claimed a process only, and had brought suit alleging that the sale of a product infringed the patent. The Court held that the sale of a product could not infringe a claim for a process and that the patentee's remedy was "by a surrender and re-issue. When this is done, the world will have fair notice of what he claims." Clearly claim 35 claims nothing.

Eleventh.—WHETHER CLAIMS 5 AND 35 OF THE PATENT IN SUIT, WHEN CONSTRUED WITH REFERENCE TO THE CANADIAN PATENT TAKEN OUT BY BERLINER AS THE ASSIGNEE OF SUESS, AND WITH REFERENCE TO EDISON'S ENGLISH PATENT NO. 1644, OF 1878, ARE INFRINGED BY DEFENDANT'S MACHINES. 109

(*This question is discussed under Point Twelve, page 187 of petitioner's brief in the Circuit Court of Appeals.*)

The question presented by this point involves the general question above discussed under Point Four of this petition, whether claims 5 and 35 of the patent in suit can reasonably be construed to cover an invention which Berliner, before he applied for the patent in suit, asserted under oath, upon the application for the Canadian patent, was broadly the invention of Suess. 110

Twelfth.—THE FOREGOING DEFENSES RAISE PURE QUESTIONS OF LAW AND PRESENT THE WHOLE CASE TO THE COURT FOR FINAL DISPOSITION UPON THE MERITS. THIS COURT HAS HELD IN HARRIMAN V. NORTHERN SECURITIES CO., 197 U. S., 284, 286, THAT UNDER SUCH CIRCUMSTANCES, IN A PROPER CASE, A PETITION FOR CERTIORARI SHOULD BE GRANTED. 111

Although the decree in this suit is an interlocutory decree granting an injunction *pendente lite*, nevertheless, it is clear that the questions presented are pure questions of law and that the entire case is before the Court in such manner that the Court can and should dispose of the case finally upon the merits. It would take years of time and cost thousands of dollars to go back to the Circuit Court, again present the same evidence, go through the idle ceremony and great expense of printing the

112 record and presenting it to a Court already bound by the decision heretofore rendered, carry the case on appeal to the Circuit Court of Appeals, which has already finally disposed of the questions involved and practically of the entire case upon the merits, and then again to present a petition for a writ of *certiorari* to this Court.

During the pendency of this suit another suit brought by the same complainants, upon the same patent and in the same Court, against another defendant, the American Graphophone Company, was brought to final hearing and a decree sustaining the patent, finding infringement and granting an injunction, with reference to claims 5 and 35 of the
113 patent, was entered October 27, 1905. In the said suit against the American Graphophone Company, which was decided by Judge Hazel in the Circuit Court (140 Fed.. 860), the injunction was likewise stayed pending appeal because of the difficulty and importance of the questions involved, and on appeal the United States Circuit Court of Appeals for the Second Circuit affirmed Judge Hazel's decree in March, 1906 (145 Fed., 350).

Judge Hazel's opinion is set forth at pages 63-73 of the record in this suit. The opinion of the Circuit Court of Appeals affirming Judge Hazel's decree is set forth at pages 73-74 of the record in this suit. Judge Townsend's opinion in the Circuit Court
114 in this suit is set forth at pages 318-327 of the record in this suit. In affirming Judge Townsend's decree in the Circuit Court in this suit, the Circuit Court of Appeals gave no written opinion, but the oral statements of the Court in affirming the decree are hereinafter set forth in this petition (pp. 41-46).

It thus appears that in this suit in equity, when complainants moved in the Circuit Court for an injunction against defendant, the patent in suit had been sustained, as to the claims five and thirty-five here involved, by Judge Hazel in the suit against the American Graphophone Company, and Judge Hazel's decree had been affirmed by the Circuit

Court of Appeals. Under familiar practice defend- 115
ant, the petitioner above-named, was not free to argue again, either in the Circuit Court or in the Circuit Court of Appeals, any of the grave and important questions of law decided in the prior suit. However, new defenses of the first importance were raised in this suit and by a record which presented the whole case to the Circuit Court in such wise that the Circuit Court and the Circuit Court of Appeals might properly have finally disposed of the suit by decree, in accordance with the well settled rule upon that subject. Although the decree for injunction in this suit was an interlocutory decree made upon a motion for an injunction *pendente lite*, an examination of the record 116
discloses that the record presented the whole case to the Court, and it is clear that, in view of the decisions of the Circuit Court and of the Circuit Court of Appeals in the prior suit and in this suit, the Circuit Court of Appeals has practically finally disposed of the case in favor of the complainants. No useful purpose would be served by compelling the petitioner, at great expense, to raise again in the Circuit Court and again in the Circuit Court of Appeals the very questions which each of those Courts has already twice passed upon. Moreover, in this suit in equity the record presented the entire case to the Circuit Court and to the Circuit Court of Appeals, and under numerous 117
decisions of this Court both the Circuit Court and the Circuit Court of Appeals could and should have finally disposed of the case in favor of the defendant, the petitioner above named, and could and should have dismissed the bill. The only claims of the patent involved, either in this suit or in the prior suit, are claims 5 and 35, complainants having abandoned not only in the prior suit, but also in this suit any contention that claim 32 or any claim other than claims 5 and 35 are infringed.

It is not necessary to enter into any discussion as to the jurisdiction of this Court in the premises,

118 since in the very recent case of *Harriman* v. *Northern Securities Co.*, 197 U. S., 244, 286, this Court granted a writ of *certiorari* under similar circumstances, entertained jurisdiction, affirmed the order of the Circuit Court of Appeals reversing the order of the Circuit Court for a preliminary injunction and did what the Circuit Court of Appeals might have done but did not do, namely, dismissed the bill. Although in the Harriman case the Circuit Court of Appeals merely reversed the order of the Circuit Court granting the preliminary injunction and refused to dismiss the bill, the complainants insisted that the Circuit Court of Appeals had practically disposed of the entire controversy on the merits. This
119 Court accepted that view and granted the writ under the circumstances, notwithstanding the fact that the decree was not final. In the opinion of this Court "the record presented the whole case to that Court in such wise that it might properly have been finally disposed of in terms by its decree in accordance with the well-settled rule upon that subject." The authorities upon this point are cited in the opinion of this Court in the Harriman case at page 286 (197 U. S.). In view of the decision in the Harriman case and in view of the authorities cited in the opinion of the Court in that case, no question can exist as to the power of this Court to grant the writ of *certiorari* in this suit to con-
120 sider the case upon the merits and dismiss the bill of complaint, if in the opinion of this Court any one or more of the defenses interposed and relied upon is a valid defense.

In *Continental Paper Bag Co.* v. *Eastern Paper Bag Co.* an *interlocutory decree* for an injunction and an accounting in a patent suit was entered by the Circuit Court (142 Fed., 479, 517), and affirmed by the Circuit Court of Appeals as to the injunction (150 Fed., 741). This Court thereupon, on March 11, 1907, granted a writ of *certiorari* (150 Fed., 741).

Thirteenth.—THE ORAL DECISION OF THE CIRCUIT COURT OF APPEALS. 121

In affirming the order for injunction *pendente lite* in this suit, the Circuit Court of Appeals did so by an oral statement delivered upon the argument and as follows:

UNITED STATES CIRCUIT COURT OF APPEALS

FOR THE SECOND CIRCUIT.

SUIT ON BERLINER PATENT NO. 534,543.

122

VICTOR TALKING MACHINE COMPANY and UNITED STATES GRAMOPHONE COMPANY,
Complainants-Appellees,

vs.

TALK-O-PHONE COMPANY,
Defendant-Appellant.

In Equity.

VICTOR TALKING MACHINE COMPANY and UNITED STATES GRAMOPHONE COMPANY,
Complainants-Appellees,

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vs.

LEEDS & CATLIN COMPANY,
Defendant-Appellant.

NEW YORK, October 12, 1906.

The Court (WALLACE, *J.*): Mr. Pettit, we can shorten your labors in this case. The Court has

124 examined the record and the briefs of counsel and has reached a conclusion favorable to the appellee upon all questions, save, perhaps, one. It is not customary for this Court, upon the decision of appeals from orders granting preliminary injunctions, to indulge in any elaborate opinion. We generally dispose of those cases without writing an opinion, and we shall dispose of this in that way.

As to the foreign Berliner patents, the German and the French patents, and also the British, we agree with Judge Townsend, first, in the proposition that those patents cover details of construction of the recorder and reproducer and are not for the broad invention of the American patent, the patent
125 in suit. We think, therefore, they are not for the same invention within the meaning of Section 4887. Under Section 4887 it did not, therefore, expire on the expiration of those patents.

As to the Canadian Suess patent, the term of that patent was for eighteen years, as stated, subject, of course, to be defeated by the non-payment of fees after the expiration of six years; but the term of the patent being for eighteen years, the expiration by non-payment after six years did not affect the expiration of the American patent.

Upon the question of abandonment we are of the opinion that the evidence does not warrant any such defense, and it is unnecessary to discuss that defense
126 in detail. And we agree with Judge Townsend throughout in the propositions stated in his opinion.

There is one defense about which we are not entirely clear. That is the defense which rests upon the proposition that by the expiration of the Suess French patent the Canadian patent expired. Of course if the Canadian patent expired, the United States patent expired at the same time. That is a defense which was not raised in the court below, and we are not fully informed about the facts in regard to that defense. We are met with the difficulty that there is no proof in the record of the Canadian law by which, as it is said,

the expiration of the French patent operated to terminate the Canadian patent. Is there any proof of that section of the Canadian statute in the record? 127

Mr. Pettit: Nothing more than the defendant has offered in evidence what purports to be a copy of the Canadian law on that subject.

The Court (Lacombe, *J.*): Where is that?

Mr. Pettit: I am mistaken in saying that. It was not offered in evidence, but it is printed in the record.

Mr. Hicks: It was annexed to the affidavit.

The Court (Lacombe, *J.*): Where is it printed in the record?

Mr. Hicks: At page 181 I set forth the material parts of the patent act of Canada. 128

The Court (Wallace, *J.*): This is a part of whose affidavit?

Mr. Hicks: Of my affidavit.

The Court (Lacombe, *J.*): Where is the clause in your affidavit that refers to this?

Mr. Pettit: I don't think he makes it a part of his affidavit.

Mr, Hicks: Oh, yes. On page 81, folio 243.

The Court (Lacombe, *J.*): All you do, you annex parts of the law of Canada.

Mr. Hicks: Yes.

The Court (Lacombe, *J.*): Material parts of the law of Canada. Well, that is no way to prove the law of Canada in the Circuit Court, by offering an inspection. Is there any testimony by anybody as to what the law of Canada was on the subject. 129

Mr. Pettit: No, sir; there is no testimony on that.

The Court (Wallace, *J.*): Where is the section on which you rely?

Mr. Pettit: Section 8 is not given here.

Mr. Hicks: I rely on the decisions of the Supreme Court.

The Court (Lacombe, *J.*): In the House of Lords?

Mr. Hicks: No; 175 U. S., 187, where the Court held that the Court could take judicial notice of the

130 Navigation Law of Canada and of all laws of sufficient notoriety to be of common interest; and it seems to me the Patent Act of Canada comes within the decision which I have cited on page 31 of my brief in reply.

The Court (Wallace, *J.*): Let us take a memorandum of that. Give us the citation again.

Mr. Hicks: The New York, 175 U. S., 187; 195 to 197.

The Court (Wallace, *J.*): You have not that book in court? Won't you send and get 175 U. S.?

Mr. Hicks: Judge Severens, in 106 Fed. Rep., 215, 218, also said that the Court itself ought to take notice of patent acts of foreign countries,

131 The Court (Wallace, *J.*): What page?

Mr. Hicks: 106 Fed. Rep., 215.

The Court (Lacombe, *J.*): We have held that the presentation of the statute is not sufficient proof of the law of foreign countries, and have stated the reason why.

Mr. Hicks: There was no objection raised in the court below in regard to the laws of different countries.

The Court (Lacombe, *J.*): It was not argued there.

The Court (Wallace, *J.*): You have not assigned any error on that ground.

Mr. Hicks: I understand it to be a general assign-
132 ment of error that the Court erred in granting a motion for a preliminary injunction.

The Court (Lacombe, *J.*): Is the language of this section anywhere on this record?

Mr. Pettit: No, sir; it is not in the record.

The Court (Lacombe, *J.*): You had better send out for it.

The Court (Wallace, *J.*): (Referring to case cited above.) This is a decision in Admiralty.

Mr. Hicks: Yes, your Honor.

The Court (Wallace, *J.*): It is a very different proposition. It was not a court of equity. A court of admiralty may do it.

Mr. Pettit: Your Honor will observe that in my brief I have pointed out the absence of this section of the statute in the record at all, and made objection to it, and further noted that this French patent is not in evidence in this case; was not offered in evidence at all. 133

The Court (Lacombe, *J.*): What—the Suess French patent?

Mr. Pettit: Yes.

The Court (Lacombe, *J.*): That is not in evidence?

Mr. Pettit: No.

Mr. Hicks: It is the same thing as the American patent.

Mr. Pettit: That is incorporated from a stipulation in the Graphophone case; that that French patent was of record in the Graphophone case—not in this case, and was not offered in this case, nor had I any notice that it would be offered until I read the brief. 134

Mr. Hicks: The translation of the French patent was put in evidence, and the evidence shows, by affidavit, that the Suess patent is a translation of the French patent, and that the claims and drawings are identical. Inasmuch as the United States Suess patent is identical with the French patent, is a translation of it—there is the stipulation which was put in evidence here - all the facts in relation to the French patent are in evidence in this suit. There is no dispute that the French patent is identical with the United States Suess patent as to the specifications, drawings and claims. 135

Mr. Pettit: There is a dispute as to the stipulation in the other suit. This matter was not brought up in the court below, and there is a stipulation there in the Graphophone case that I want to explain here if this point is to be considered at all. There was an error in the number in that stipulation. It was admitted by counsel in the Graphophone case. We never stipulated that the Suess French patent was the same as the Berliner United States patent. It

136 is obvious on its face. We have defenses regarding this Suess French patent which we can make here, if we had an opportunity to do it, which would utterly dispose of the French patent; but we have not had that opportunity.

The Court (Wallace, *J.*): Well, we think the point is one which we ought not to consider. In the first place, there is no specific assignment of error. In the next place, it was not raised in such a manner in the Court below that it could be met. In the next place, it is an extremely technical defense and one which the Court should not be very anxious to sustain. In the next place, if it is a good defense it can be introduced by proof and established on final
137 hearing. But the Court is of opinion that it should not reverse this case upon that proposition, even though it should be assumed that a good defense rests upon that ground. That being so, there is nothing to sustain the appellants' contention.

The order is affirmed.

Fourteenth.—THE QUESTION OF THE EXPIRATION OF THE BERLINER-SUESS CANADIAN PATENT, BY REASON OF THE LAPSING OF THE SUESS FRENCH PATENT, DISCUSSED UNDER POINT NINE OF PETITIONER'S BRIEF IN THE CIRCUIT COURT OF APPEALS, IS NOT AVAIL-
138 ABLE, FOR THE REASONS STATED BELOW.

Neither the Suess French patent nor the particular section of the Canadian statute relied upon was in evidence, and it is claimed by complainant's counsel that the French patent had lapsed before the grant of the Canadian patent, and that, therefore, as the French patent did not *exist* when the Canadian patent was granted, the lapsing of the French patent did not affect the Canadian patent under the decision of the House of Lords in *Dominion Cotton Mills Co.* v. *General Engineering Co.*, L. R. App. Cas. (1902), p. 570.

Conclusion.—IT IS RESPECTFULLY SUBMITTED 139
THAT, FOR THE REASONS STATED, THE PETITION FOR THE WRIT OF CERTIORARI SHOULD BE GRANTED.

Dated New York, March 28, 1907.

LOUIS HICKS,
Solicitor for Petitioner.
Office and Post Office address,
71 Nassau Street,
New York, N. Y.

State and County of New York, ss.: 140

EDWARD F. LEEDS, being duly sworn, says: That the Leeds & Catlin Company, the petitioner named in the foregoing petition, is a corporation organized and existing under the laws of the State of New York, and that he is president thereof; that he has read the foregoing petition and knows the contents thereof, and that the same is true to his knowledge, except as to the matters therein stated to be alleged upon information and belief and that as to those matters he believes it to be true.

EDWARD F. LEEDS.

Subscribed and sworn to before me this 6th day of May, 1907. 141

HARRY C. ADAMS,
[NOTARY'S SEAL.] Notary Public,
New York Co.

United States Circuit Court of Appeals

FOR THE SECOND CIRCUIT.

VICTOR TALKING MACHINE COMPANY and UNITED STATES GRAMOPHONE COMPANY,

Complainants-Appellees,

vs.

TALK-O-PHONE COMPANY,

Defendant-Appellant.

VICTOR TALKING MACHINE COMPANY and UNITED STATES GRAMOPHONE COMPANY,

Complainants-Appellees,

vs.

LEEDS & CATLIN COMPANY,

Defendant-Appellant.

APPELLANTS' BRIEF.

LOUIS HICKS,
Counsel for Defendants-Appellants,
71 Nassau Street,
New York, N. Y.

SUMMARY AND INDEX OF APPELLANTS' ARGUMENT.

PAGE

Statement. 1

Assignment of Errors. 3

POINT ONE. Berliner's basic invention for the gramophone is set forth in letters-patent of the United States No. 372,786, of November 8, 1887, the application for which was filed May 4, 1887. The patent in suit, including claims 5 and 35 thereof, describes and claims only improvements upon the basic invention. The Circuit Court, therefore, erred in holding that claims 5 and 35 of the patent in suit are claims for the basic invention, and erred in holding that the patent in suit did not expire, as to claims 5 and 35, with the expiration of prior foreign patents to Berliner for an invention for which the patent in suit was granted. 7

(*a*) *The Circuit Court, being in doubt, was constrained to grant the injunctions to permit appeals to be taken.* 7

(*b*) *In the prior suit, the evidence was not sufficient to differentiate Berliner's basic invention.* 9

(*c*) *Brief statement of Berliner's basic invention. Claims 5 and 35, in suit, are for improvements thereon.* 10

(*d*) *A comparison and analysis of the patent in suit and of Berliner's other patents, three of which granted to him for his inventions and the inventions of Werner Suess are new evidence, show the limitations of the improvements in claims 5 and 35 and in the other claims of the patent in suit.* 13

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(e) The expression "principal invention" was used by the Supreme Court in Siemens' Adm'r v. Sellers, 123 U. S. 276, merely to designate one of two inventions, and not as a ground of decision. The Circuit Court erred in refusing to follow the principle of the decision in that case and in holding that the patent in suit has a plurality of terms. 21

(f) Berliner's basic invention is set forth in his basic patent No. 372,786. 23

(g) Method of reproducing sound according to Berliner's basic invention. The method employed by defendants is an improvement thereon. 25

(h) No matter what may be the construction given to claims 5 and 35, the two claims, like all the other claims of the patent in suit, are claims for improvements merely. 27

(i) In the prior suit, the Circuit Court of Appeals and the Circuit Court, not having Berliner's basic patent No. 372,786 before them, assumed, the point not being important there as it is here, that patent No. 564,586 was Berliner's basic patent. 28

(j) Berliner's prior foreign patents further prove that claims 5 and 35, like all the other claims of the patent in suit, cover only improvements upon his basic invention. 30

(k) Claims 5 and 35, construed in the light of the new evidence presented in the records of the suits at bar, are limited to improvements, and to improvements in the details of construction of the reproducer. The Circuit Court erred in holding that these claims cover a basic invention. 33

(l) Defendants do not use the improved reproducer of the patent in suit. 33

(m) Berliner's basic invention and his and Suess' improvements thereon, shown by the patents in evidence, were all patented in for-

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cign countries, before the grant of the patent in suit, by patents which have all expired. Berliner's home patents for his same basic invention and improvements thereon have also expired. The holding of the Circuit Court that claims 5 and 35 can alone still survive is contrary to the plain meaning, and contrary to the equity, of § 4887 of the Revised Statutes. 34

(*n*) *Conclusion of Point One.* 36

POINT TWO. Berliner patent in suit No. 534,543, of February 19, 1895, was granted for an invention previously patented by Berliner in Germany, by Berliner German patent No. 53,622, of November 20, 1889. The term of the patent in suit, therefore, expired with the expiration of the term of the prior German patent on Nov. 7, 1902, before either of these suits was begun. Section 4887 of the Revised Statutes considered and the authorities collated. 37

(*a*) *German patent No. 53,622 is new evidence. Defendants' affidavits show that it was granted for an invention for which the patent in suit was granted.* 37

(*b*) *German patent No. 53,622, being a patent for an improvement, expired on Nov. 7, 1902, according to the German law, with the patent for the invention upon which the improvement was made.* 37

(*c*) *The description and claims of the patent in suit for the invention previously patented by the German patent.* 38

(*d*) *The description and claim of the prior German patent for an invention for which the patent in suit was granted. Judge Townsend found that the invention described and claimed in the German patent is described and claimed in the patent in suit.* 43

(*e*) *Futile effort of complainants' counsel in the Circuit Court to find some slight difference between the description and drawings of*

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German patent No. 53,622 and French patent No. 207,090 and the description and drawings of the patent in suit. 45

(*f*) *The provision of § 4887 of the Revised Statutes, fixing the single term of a home "patent granted for an invention" previously patented in a foreign country, is clear and unambiguous and must control the decision in these suits without change by judicial action "based upon some supposed policy of Congress." The Circuit Court erred in refusing to follow the unambiguous provision of the Statute, and in holding, contrary to the statute and the decision of the Supreme Court, that a patent can have a plurality of terms and can expire in parcels.* 48

(*g*) *The principle of the decisions of the Supreme Court in Siemens' Adm'r v. Sellers, 123 U. S. 276, and of the lower courts following that decision, is that a "patent cannot expire in parcels", "cannot be construed as running partly from one date and partly from another. This would be productive of endless confusion." Such principle is derived from, and is the only principle which can be derived from, the provision of § 4887 of the Revised Statutes fixing the term of the patent.* 55

(*h*) *Broadening or narrowing of the claims of an American patent will not prevent the operation of the Statute.* 58

(*i*) *The test of the question, whether an American "patent is granted for an invention" previously patented in a foreign country, is whether an article made according to the description of the invention of the foreign patent would infringe the American patent, that is any claim of the American patent.* 58

(*j*) *In determining whether a home patent is granted for an invention previously patented in a foreign country, the precise question is whether ANY of the claims of the home patent include the invention or some substantive part*

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of the invention shown by the prior foreign patent. If so, the home patent expires as to all its claims with the foreign patent since a "PATENT CANNOT EXPIRE IN PARCELS." 60

(k) The Circuit Court and the Circuit Court of Appeals for the Second Circuit have determined the question, whether a home patent was "granted for an invention" previously patented in a foreign country, by ascertaining whether "ANY ONE of the inventions" claimed in the home patent is contained in the prior foreign patent, and whether any claim of the home patent would be infringed by the structure of the foreign patent; and have held, in effect, that in such case the home patent could not expire in parcels. 62

(l) The improvements claimed in claims 24-34 are included among the elements of the improvements claimed in claims 5 and 35 of the patent in suit. Claims 5 and 35, being claims for improvements merely, as above shown under Point One, must expire, under any construction of the Statute, with the expiration of other claims for improvements, and, being claims for improvements which include the improvements claimed in the claims which concededly have expired, claims 5 and 35 must, a fortiori, have expired with the expiration of the other claims for improvements. 65

(m) Judge Brown has held, in Sawyer Spindle Co. v. Carpenter, 133 Fed. 238, aff'd, 143 Fed. 976, (1), that a patent cannot expire in part and survive in part; and (2) that a generic claim, covering the specific form of a specie claim and other forms as well, must, under any construction of the statute, expire with the expiration of the specie claim. Hence, if claims 5 and 35 in suit are generic or broad claims, they must have expired, with the specie claims under the second part of Judge Brown's decision, as well as under the first part. 69

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(n) In order that the statute shall apply and limit the term of the home patent, the home patent must be granted for an invention for which the prior foreign patent was granted. Aquarama Co. v. Old Mill Co., 124 Fed. 229; Westinghouse Co. v. Stanley Co., 138 Fed. 123. 71

(o) Judge Lacombe, in the Welsbach Light Co. cases, held that the broad generic claim of a home patent expired with the expiration of a prior foreign patent which did not cover the broad invention but covered only a species of the invention. 74

(p) Broadening or narrowing the invention of the home patent, or changing the form of the claims from process to product, will not save the home patent. If a structure made pursuant to the prior foreign patent will infringe the home patent, the latter expires with the former. This, say Judges Coxe and Wheeler, is the essence of the test. 77

POINT THREE. Berliner patent in suit No. 534,543, of February 19, 1895, was granted for inventions previously patented by Berliner in France, by Berliner French patent No. 207,090, of July 19, 1890. The term of the patent in suit, therefore, expired with the expiration of the term of the prior French patent on July 19, 1905, before the motions for preliminary injunction were made. 79

(a) French patent No. 207,090 is new evidence. Defendants' affidavits show that it was granted for inventions for which the patent in suit was granted. 79

(b) French patent No. 207,090, according to the French law, expired July 19, 1905. 80

(c) The description and claims of the prior French patent and of the patent in suit for inventions for which the patent in suit was granted. 80

(d) Judge Townsend found that French patent No. 207,090 covers the improvements of

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the patent in suit in the recorder and reproducer. 89

POINT FOUR. Berliner patent in suit No. 534,543, of February 19, 1895, expired, before suit was begun, on November 8, 1901, with English patent No. 15,232, of November 8, 1887; and on November 7, 1902, with German patent No. 45,048, of November 8, 1887; and on November 8, 1902, with French patent No. 186,827, of November 8, 1887. 90

(*a*) *This defense of expiration is based upon the opinion of the Circuit Court of Appeals in the prior suit.* 90

(*b*) *The inventions covered by the three patents mentioned were "previously patented" in the foreign countries.* 91

(*c*) *The three prior foreign patents mentioned, each, cover the inventions of Berliner's home patents No. 564,586 and No. 372,786.* 91

(*d*) *The Circuit Court of Appeals held, in the prior suit, that claims 5 and 35, in suit, broadly cover the invention of patent No. 564,586; hence, they cover the same invention previously patented in the three foreign patents mentioned.* 93

(*e*) *If the invention of claims 5 and 35, in suit, is not the same as the invention of patent No. 564,586, then defendants' new defence of two years prior, public use is a valid, complete defence, proven beyond a reasonable doubt.* 94

(*f*) *Berliner himself, in patent No. 564,586, asserts that the invention, illustrated in Fig. 10 of that patent and construed by the courts on the evidence in the prior suit to be the invention of claims 5 and 35 in suit, is a mere modification, embodying the main features of the invention of patent No. 564,586.* 98

(*g*) *The evidence shows that the invention of claims 5 and 35 in suit, as construed by the*

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courts in the prior suit, on the evidence therein, is the same as the invention of patent No. 564,586 and of the three prior foreign patents mentioned. 100

(*h*) *Two patents are for the same invention, although each attempts to cover separate features thereof. The finding of the Circuit Court that the three prior foreign patents do not show Fig. 10 of patent No. 564,586, is, therefore, immaterial.* 101

(*i*) *It may, in addition, be noted that claims 31 and 32 and 6 and 8 of the patent in suit would be infringed by the lever and stylus of the prior German patent mentioned.* 104

(*j*) *Claims 5 and 35 of the patent in suit, claim 8 of patent No. 564,586, and claim 9 of the prior English patent mentioned, for example, cover the same invention. Claims 5 and 35 could not, therefore, survive the expiration of the three prior foreign patents mentioned.* 106

(*k*) *As above shown under sub-division (h) of this point, two patents cannot be secured for separate features of an invention. The invention of claims 5 and 35 in suit, is a feature of the invention of patent No. 564,586, or it is not. If it is, then that INVENTION was previously patented by the three foreign patents mentioned and claims 5 and 35 expired with them; if it is not, then the application for patent No. 564,586, filed Nov. 7, 1887, was not an application for the invention of claims 5 and 35 and the new defence of two years prior, public use set forth under subdivision (e) of this point is valid.* 111

(*l*) *The new evidence in the suits at bar proves that Berliner was not the inventor of the invention of claims 5 and 35 as construed by the courts in the prior suit.* 111

POINT FIVE. Grouping together the expired prior foreign Berliner patents discussed under

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Points Two, Three and Four, it is clear that the essence of the invention set forth in the various claims of the patent in suit was previously patented in foreign countries. There is no authority in the Statute for holding that claims 5 and 35 in suit can still survive. 113

POINT SIX. In Canadian patent No. 41,901, of February 11, 1893, to Berliner, assignee of Suess, Berliner asserted that a reproducing stylus mounted to have a free movement controlled by the walls of the record-groove over the surface of the record tablet was the invention of Suess. Unless, therefore, claims 5 and 35 of the patent in suit are limited to Berliner's improvements in the details of construction of his reproducer, Suess anticipated Berliner and claims 5 and 35 are invalid. 115

(*a*) *The Canadian patent is set forth in the records and discussed in defendants' affidavits.* 115

(*b*) *Judge Townsend correctly found that the Canadian patent "discloses and broadly claims the invention of the claims here in suit", as construed by the courts in the prior suit; and erred in not further finding, as a result thereof, that unless a limited construction be put upon the said claims, they are invalid.* 116

(*c*) *The new evidence in the suits at bar proves that the features of the gramophone here in controversy were the invention of Suess and in no particular the invention of Berliner.* 119

(*d*) *In the prior suit, complainants, in order to distinguish the Berliner-Suess home patent, relied upon the absence of claims therein broadly covering the pivoted swinging arm and the stylus point adapted to be vibrated and propelled by the record-groove. The Berliner-Suess Canadian patent contains such broad claims and covers the invention of claims 5 and 35 in suit, as construed by the courts in the prior suit.* 120

(*e*) *In the prior suit, because of the absence*

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of the evidence contained in the records of the suits at bar, the courts were not apprised of the radical departure of Suess' improvements from Berliner's early gramophone and were not informed that defendants' machines, as to the features in controversy, embody only Suess' improvements. 121

(*f*) *The claims of the Berliner-Suess Canalian patent prove that the movement of the stylus across the face of the record by means of the pressure exerted upon the stylus by the walls of the record-groove was the invention of Suess. This explains why that invention was never previously or subsequently claimed by Berliner and necessitates a limited construction of claims 5 and 35 in suit.* 122

(*g*) *Had the new evidence in the suits at bar been before the courts in the prior suit, the limitations of the invention of claims 5 and 35 in suit would have been clearly understood and stated.* 123

(*h*) *It is not reasonable to hold that what Berliner claimed in Canada as the invention of Suess, he subsequently claimed in the United States, by the claims in suit, as his own invention. Claims 5 and 35 must, therefore, be limited, and, when limited, they are not infringed by defendants.* 124

(*i*) *Defendants use the reproducer of Suess' gramophone, shown in the Canadian patent, which reproducer has none of the features of the invention of the patent in suit. Defendants' machines embody the invention of Suess.* 127

(*j*) *The same patent solicitor, acting for Berliner, made the application for the Berliner-Suess Canadain patent and the application for the patent in suit. It is not reasonable to hold that he first claimed the invention for Suess in Canada and then claimed the same invention for Berliner in the United States.* 128

(*k*) *Berliner's Canadian patent No. 55,079,*

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identical with the patent in suit, was applied for and issued after the issue of the Berliner-Suess Canadian patent; hence, the Canadian patent office, as well as Berliner, considered that claims 5 and 35 did not cover the broad invention of the earlier Berliner-Suess Canadian patent, but were limited, as above stated. 129

POINT SEVEN. Unless claims 5 and 35 of the patent in suit are limited by Berliner's improvements in the details of construction of his reproducer, abandonment of the invention by Berliner is clearly proved. 130

(a) The Berliner-Suess Canadian patent is incontrovertible proof of abandonment by Berliner. 130

(b) Berliner, having elected to claim the invention in Canada as the invention of Suess, became estopped, under the authorities, from subsequently claiming the invention as his own. 131

(c) Other evidence in the records, taken with the Berliner-Suess Canadian patent, further proves abandonment by Berliner. Berliner never claimed in any patent the special features shown in Figure 10 of patent No. 564,586, because they were not his invention. 132

(d) In the Electrical World for November 12, 1887, more than four years before the application for the patent in suit was filed, Berliner published a description of the special features of the apparatus shown in Figure 10 of patent No. 564,586. After that date Berliner never again described or referred to such impractical apparatus. 133

(e) In his lecture before the Franklin Institute on May 16, 1888, Berliner acknowledged that the freely swinging, pivoted arm adapted, with the aid of the record-groove to guide the reproducing stylus across the face of the record, was the very ingenious adaptation of Suess. 135

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(f) In the Electrical World for August 18, 1888, nearly four years before the application for the patent in suit was filed, Berliner published a complete description of the perfected gramophone, with a perfect illustration thereof embodying the invention of Suess, which invention included all the features of defendants' machines and all the features shown and claimed in the Berliner-Suess Canadian patent. Still Berliner made no claim in any patent for such features. 136

(g) In Berliner-Suess United States patent No. 427,279 issued May 6, 1891, on an application filed August 6, 1889, nearly three years before the application for the patent in suit was filed, Berliner published a full description and illustration of the perfected gramophone shown in the Electrical World for August 18, 1888, and still made no claim that the features thereof here in controversy were his invention. 137

(h) On May 5, 1891, about a year before the application for the patent in suit was filed, Berliner, as the assignee of Suess, applied for the Berliner-Suess Canadian patent, disclosing and claiming therein as the invention of Suess, all the features of the gramophone here in controversy, as Judge Townsend has found. Still Berliner had made no claim in any patent that he was the inventor of such features. 138

(i) When, on March 30, 1892, Berliner filed the application for the patent in suit, he had irrevocably abandoned any right which he may have had to claim as his invention the features of the gramophone here in controversy. 139

(j) The new evidence in the suits at bar conclusively shows that the apparatus shown in Figure 10 of patent No. 564,586 was impracticable, and never went into use. If it was the invention of Berliner, he abandoned it. 139

(k) The freely swinging, pivoted arm with the horn and reproducing diaphragm and stylus mounted thereon are features of the Suess

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invention, and such features are embodied in defendants' machines. Such a horn could not possibly be used in the apparatus shown in Figure 10 of patent No. 564,586, and for other reasons set forth in the affidavits of defendants' experts, the apparatus shown in said Figure 10 is impracticable. 143

(*l*) *An impracticable apparatus is not, under the authorities, an anticipation of a successful apparatus.* 144

(*m*) *Abandonment of an invention may be evinced by the conduct of the inventor at any time before or after the patent is granted.* 145

POINT EIGHT. Berliner patent in suit No. 534,543, of February 19, 1895, expired February 11, 1899, before this suit was begun with the expiration of the term of six years for which the prior Berliner-Suess Canadian patent No. 41,901, of February 11, 1893, was granted. 145

(*a*) *Judge Townsend found that the Berliner-Suess Canadian patent "discloses and broadly claims the invention covered by the claims here in suit," and "that if this patent expired, as claimed in 1899, the patent in suit expired at the same time." Judge Townsend was in great doubt as to the effect upon the patent in suit, of the expiration of the Canadian patent in 1899, but resolved the doubt on this and other points in favor of complainants to permit an appeal to be taken.* 145

(*b*) *Assuming, as Judge Townsend found, that the Berliner-Suess Canadian patent "discloses and br[illegible]ly claims the invention covered by the claims here in suit", the patent in suit expired with the expiration of the six year term for which the Canadian patent was granted, on Feb. 11, 1889.* 147

(*c*) *The invention of the Berliner-Suess Canadian patent was, under the statute and decided cases, patented and caused to be patented by Berliner, the patentee of the patent in suit.* 148

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(d) Under the patent act of Canada a Canadian patent expires, within the meaning of § 4887 of the Revised Statutes at the expiration of the term for which the fee to the government has been paid, unless a further fee for a further term is paid. The patent does not lapse, and is not forfeited, but its term expires. 150

(e) Judge Townsend erred in holding that the legal term of the Canadian patent did not expire but lapsed or became forfeited in 1899. The Bonsack case, cited by Judge Townsend in support of his ruling, is directly opposed thereto, and the Welsbach case, cited by him in support of his ruling, in no way involved the question at issue. 152

(f) In the Bonsack case it was squarely held that a Canadian patent for which the fee for a five year term only had been paid and which was not prolonged by payment of a further fee for a further term before the expiration of the original five year term, expired with the expiration of the original five year term and did not lapse or become forfeited. 154

(g) In the Welsbach case the only question involved was whether, where a prior French patent had lapsed before the grant of the home patent but after the filing of the application therefor, the home patent was invalid upon the ground of abandonment or other ground arising out of those facts only. The question whether the prior French patent had lapsed or had expired was not involved, for, concededly, it had lapsed. 158

(h) The distinction, under § 4887 of the Revised Statutes, between patents granted for a short term and not prolonged before the expiration of the short term for a further term by reason of which the short term and the patent expire by lapse of time, and patents granted for a fixed term subject to forfeiture or lapsing as a penalty upon breach of a condition subsequent during the term for which the patent was granted is well settled by authority in the pat-

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ent law of this country. Judge Townsend erred in not recognizing this distinction and in not holding under the doctrine of stare decisis that the Canadian patent expired in 1899 with the expiration of the six year term for which it was granted, and which was the only term it ever had. 159

POINT NINE. The Berliner-Suess Canadian patent No. 41,901, of February 11, 1893, could not, under the Canadian patent Act, be prolonged beyond May 6, 1905, because the same invention having been patented by Suess on May 6, 1890 by French patent No. 205,491, "under any circumstances, if a foreign patent exists, the Canadian patent shall expire at the earliest date on which any foreign patent for the same invention expires." Therefore, even if the Canadian patent did not expire in 1899, it did expire on May 6, 1905, with the expiration of the term of the prior French patent, and with it the patent in suit expired, before the making of the motions for preliminary injunction. 167

POINT TEN. Berliner patent in suit No. 534,543 was anticipated by English patent No. 1644, of 1878, to Edison, as to claims 5 and 35, if those claims are to be broadly construed and not limited by the special form of reproducer shown in figures 6 and 7. 176

POINT ELEVEN. In the prior suit between complainants and the American Graphophone Company decided by Judge Hazel and the Circuit Court of Appeals, complainants, by contract, promised the defendant, the American Graphophone Company, a license under the patent in case defendant should lose, and promised also by the same contract to waive all claim for past royalties and damages. The prior suit was not, therefore, a suit in which Berliner patent in suit No. 534,543, of February 19, 1895, was fairly in controversy. The Circuit Court of Appeals has held defendant was guilty of laches in its search for defences in that suit. 182

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POINT TWELVE. Defendants' machines do not infringe claims 5 and 35 of the patent in suit when those claims are properly construed in view of the prior art disclosed by defendants in opposition to the motions. 187

POINT THIRTEEN. Complainants delayed the prosecution of these suits, took no testimony and defendants were entitled, at the time of the motions, to dismissals of the bills upon the pleadings under the rules of the Circuit Court. 188

POINT FOURTEEN. Sound records having lateral undulations existed before the date of the invention of the patent in suit and were patented by Berliner in several forms in divers patents which have expired. Such records are capable of use with machines of various constructions. The proposition that the making and selling of such sound records can be an infringement of the patent in suit in untenable. 191

POINT FIFTEEN. The Talk-O-Phones operating by mechanical feed devices do not infringe claims 5 and 35 of the patent in suit. 195

CONCLUSION. It appearing that the patent in suit expired before either of these suits was begun and that the claims in suit are invalid or not infringed, the motions for preliminary injunction should have been denied and the bills dismissed. The orders should, therefore, be reversed with directions to dismiss the bills. 198

Argued by
Louis Hicks.

United States Circuit Court of Appeals

FOR THE SECOND CIRCUIT.

VICTOR TALKING MACHINE COMPANY and UNITED STATES GRAMOPHONE COMPANY,
Complainants-Appellees,

vs.

TALK-O-PHONE COMPANY,
Defendant-Appellant.

VICTOR TALKING MACHINE COMPANY and UNITED STATES GRAMOPHONE COMPANY,
Complainants-Appellees,

vs.

LEEDS & CATLIN COMPANY,
Defendant-Appellant.

APPELLANTS' BRIEF.

Statement.

These are appeals from orders granting preliminary injunctions. The bills allege infringement of claims 5 and 35 of Letters-Patent No. 534, 543, of February 19, 1895, to Emile Berliner, for improve-

ments in the method of and apparatus for recording and reproducing sounds. Claims 5 and 35 of the patent were sustained at final hearing by Judge Hazel, whose decision was affirmed on appeal by the Circuit Court of Appeals, in the suit of these complainants against the American Graphophone Company. In the court below, in the suits at bar, the motions for preliminary injunction were argued together, because the defences interposed on behalf of each defendant were, for the most part, alike. There is, however, one substantial difference between the positions of the two defendants. The Talk-O-Phone Company manufactures only talking machines (p. 283, fol. 849) and the Leeds & Catlin Company manufactures only sound records (p. 116, fol. 347). In the settlement of an account, the Leeds & Catlin Company took a number of talking machines from the Talk-O-Phone Company in part payment (p. 292, fol. 876; p. 284, fol. 851). Hence, the questions presented in the two suits are alike, although the interest of the Talk-O-Phone Company in the suits is far greater than that of the Leeds & Catlin Company. There is no connection whatever existing between the Talk-O-Phone Company and the Leeds & Catlin Company, and the affidavit of Thomae in the Talk-O-Phone Company case to that effect, based entirely upon innuendo, is false and disproved by the answering affidavits of Mr. Irish and of Mr. Leeds (T. case, pp. 325, 328; L. & C. case, pp. 309, 312), presidents, respectively, of the Talk-O-Phone Company and of the Leeds & Catlin Company.

It will save the time of the court to argue the appeals in the two above entitled suits together. The records on appeal in the two suits are identical, except that at pages 47-49 an affidavit of Kennedy alleging infringement appears in the Talk-O-Phone Company case and an affidavit of Fagan alleging

infringement appears in the Leeds & Catlin Company case, and except that the affidavit of Thomae which appears at pages 309-324 of the Talk-O-Phone Company case is not a part of the record in the Leeds & Catlin Company case. Excepting the affidavits of Kennedy and Fagan mentioned, the numbers of the pages and the subject matters of the two records are identical up to and including page 308. After page 308 the subject matters of the two records are identical except that the Thomae affidavit is not a part of the record in the Leeds & Catlin Company case, and the numbers of the pages subsequent to page 308 differ in the two records because of the in ertion of the Thomae affidavit in the record in the Talk-O-Phone Company case at pages 309-324 thereof.

Separate references in this brief to the records will, therefore, seldom be necessary, and only when reference is made to the pages subsequent to page 308.

Assignment of Errors.

The errors assigned, all of which are relied upon, are the same in both suits (T., case, p. 549; L. & C., case, p. 534) and are as follows;—

The Circuit Court erred in the following particulars:

1. In not holding that the patent in suit, No. 534,543, expired with the prior German patent No. 53,622, of November 20, 1889.

2. In not holding that claim 5 of the patent in suit, No. 534,543, expired with the prior German patent No. 53,622, of November 20, 1889.

3. In not holding that claim 35 of the patent in suit, No. 534,543, expired with the expiration of the prior German patent, No. 53,622, of November 20, 1889.

4. In not holding that the patent in suit, No. 534,543, expired with the prior French patent No. 207,090, of July 19, 1890.

5. In not holding that claim 5 of the patent in suit, No. 534,543, expired with the prior French patent No. 207,090, of July 19, 1890.

6. In not holding that claim 35 of the patent in suit, No. 534,543, expired with the expiration of the prior French patent No. 207,090, of July 19, 1890.

7. In not holding that the patent in suit, No. 534,543, including claims 5 and 35, expired with English patent No. 15,232, of November 8, 1887.

8. In not holding that the patent in suit, No. 534,543, including claims 5 and 35, expired with German patent No. 45,048, of November 8, 1887.

9. In not holding that the patent in suit, No. 534,543, including claims 5 and 35, expired with French patent No. 186,827, of November 8, 1887.

10. In not holding that Berliner was not the inventor of the invention set forth in claims 5 and 35 of the patent in suit.

11. In not holding that the invention of claims 5 and 35 of the patent in suit, No. 534,543, was anticipated by Werner Suess in Canadian patent No. 41,901, of February 11, 1893.

12. In not holding that Berliner had abandoned the invention claimed in claims 5 and 35 of the patent in suit, No. 534,543, before he applied for a patent therefor.

13. In not holding that Berliner had abandoned the invention claimed in claims 5 and 35 of the patent in suit, No. 534,543, before the patent was issued.

14. In not holding that claims 5 and 35 of the patent in suit, No. 534,543, should be limited to Berliner's improvements in the details of construction of his reproducer.

15. In not holding that defendant's devices do not infringe claims 5 and 35 of the patent in suit, No. 534,543.

16. In not holding that the patent in suit, No. 534,543, expired February 11, 1899, with the expiration of the term of six years for which the prior Canadian patent, No. 41,901, of February 11, 1893, was granted.

17. In not holding that claims 5 and 35 of the patent in suit, No. 534,543, were anticipated by English patent No. 1644, of 1878, to Edison.

18. In not holding that the patent in suit, No. 534,543, was not fairly in controversy in the prior suit between these complainants and the American Graphophone Company, and that the adjudication in that suit formed no proper basis for a preliminary injunction.

19. In not holding that at the time of the hearing of the motion for preliminary injunction defendant was entitled to have the cause heard upon the pleadings and the bill dismissed.

20. In not holding that the patent in suit, No. 534,543, had expired before the commencement of this suit.

21. In not holding that the patent in suit No. 534,543 had expired before the making of the motion for preliminary injunction and the making of the order entered May 2, 1906, and hereby appealed from.

22. In not denying the motion for preliminary injunction.

23. In not dimissing the bill of complaint upon the hearing of the motion for preliminary injunction.

24. In not holding that claims 5 and 35 of the patent in suit, No. 534,543, are and always have been invalid by reason of more than two years public prior use in the United States by Berliner before the date of the filing of his application therefor.

25. In not holding that claims 5 and 35 of the patent in suit, No. 534,543, are and always have been invalid by reason of more than two years public prior use in the United States by T. Commerford Martin before the date of the filing of the application therefor.

26. In not holding that in view of the state of the prior art claim 5 of the patent in suit, No. 534,543, is void for lack of invention.

27. In not holding that in view of the state of the prior art claim 35 of the patent in suit, No. 534,543, is void for lack of invention.

28. In not holding that in view of the prior art, claim 5 should be limited to a method of reproducing sounds wherein the stylus is vibrated substantially as described in the specification of the patent in suit, No. 534,543, and shown in figures 6 and 7 thereof.

29. In not holding that in view of the prior art, claim 35 of the patent in suit, No. 534,543, should be limited to a sound reproducing apparatus having a reproducing stylus free to be vibrated substantially as described in the specification and shown in figures 6 and 7 thereof.

30. In not holding that claim 5 of the patent in suit, No. 534,543, is void as being for the function of a machine.

31. In not holding that claim 35 of the patent in suit, No. 534,543, is void as being for the function of a machine.

32. In not holding that claim 35 of the patent in suit, No. 534,543, is void as being indefinite, meaningless and claiming nothing.

33. In enjoining the manufacturing and selling of an article under claim 5 of the patent in suit, No. 534,543, which is limited to a method.

34. In granting the order for preliminary injunction.

35. In not denying the motion for preliminary injunction because of complainants' failure to prove title to the patent in suit, No. 534,543.

POINT ONE.

Berliner's basic invention for the gramophone is set forth in Letters Patent of the United States No. 372,786, of November 8, 1887, the application for which was filed May 4, 1887. The patent in suit, including claims 5 and 35 thereof, describes and claims only improvements upon the basic invention. The Circuit Court, therefore, erred in holding that claims 5 and 35 of the patent in suit are claims for the basic invention, and erred in holding that the patent in suit did not expire, as to claims 5 and 35, with the expiration of prior foreign patents to Berliner for an invention for which the patent in suit was granted.

(a). The Circuit Court, being in doubt, was constrained to grant the injunctions to permit appeals to be taken.

Judge Townsend, as appears from his opinion, was in great doubt upon the questions of law raised by the defenses interposed. The learned Judge states in his opinion that he was able to give the authorities cited but a brief examination (T. case, p. 339, fol. 1017; L & C case, p. 323, fol. 969). Although he "reached the conclusion that, *except as to the Suess Canadian patent* No. 41901, the defendants have failed to introduce any new matter which would, in my judgment, have led the Courts to reach a different conclusion if it had been before them in the original suit", nevertheless, even if he was "mistaken in this view," he was, as he says, "*constrained to grant the injunction in order to permit an appeal* and a determination of the questions at the *earliest possible moment*" (T. case, p. 343; L & C case, p. 327). To enable an appeal at once to be taken he "concluded to resolve the doubt" in favor of the complainants (T. case, p. 342, fol. 1026; L & C case, p. 326, fol. 978). The defence of the Suess Canadian patent was alone sufficient to warrant not only a denial of the motions for injunction, but also a dismissal of the bills. However, in order that the Circuit Court of Appeals might pass upon *all* the questions of law and fact raised by the defences interposed, and upon which Judge Townsend was in such doubt, all questions were, for this purpose, resolved in favor of complainants, and decrees for preliminary injunction were entered and stayed pending appeal upon the filing of the usual bonds. Judge Townsend, concluding his opinion, said:—

> "But *even if I am mistaken in this view*, and *if the expiration of the Suess Canadian patent is a complete defence* or *if a decision of the questions raised as to the character and scope of the various patents now introduced for the*

first time should be postponed until final hearing, yet I am *constrained* to grant the injunction in order to permit an appeal and a determination of the questions at the earliest possible moment."

The records before Judge Townsend in the two suits at bar were voluminous, as he said. The reason is that many serious and new defences were interposed by the defendants to the motions for preliminary injunction which were not in any way involved in the prior suit decided by Judge Hazel and the Circuit Court of Appeals. Judge Townsend, therefore, had before him not merely new and important questions of law, but also new and important proofs. Being no doubt, pressed for time, and desiring an early decision by the Appellate Court of the questions presented he was probably able to give less consideration to the subject matter of the new evidence presented to him which he regarded as voluminous and which was not in printed form, than to the authorities cited of which his examination was, as he says, brief.

(*b*). *In the prior suit, the evidence was not sufficient to differentiate Berliner's basic invention.*

In the prior suit decided by Judge Hazel, the evidence was not sufficient to differentiate Berliner's basic invention from the improvements which Berliner made thereon. The defences interposed did not require it. Judge Hazel, therefore, *assumed*, the point not being important in the suit before him, that the invention described and claimed in Berliner's patent No. 564,586, of July 28, 1896, applied for November 7, 1887, included Berliner's basic invention, whereas the fact is, and the proofs now before the court conclusively show, that the invention described and claimed in patent No. 564,586 consists entirely of *improvements* upon

the basic invention. When the Circuit Court of Appeals, in its opinion affirming Judge Hazel's decree, stated that claims 5 and 35 of the patent in suit were "broader claims" for the invention described in patent No. 564,586, and that those claims could have been made in that patent, that court did not hold that claims 5 and 35 of the patent in suit were claims for the basic invention, even though they be "broader claims," and if such holding had been made in that suit the holding would be incorrect upon the proofs now before the court, because the fact is, as the *new* proofs show, that on May 4, 1887, Berliner applied for and on November 8, 1887, obtained his first patent, No. 372,786, for the gramophone, describing and claiming therein his basis invention.

(c). Brief statement of Berliner's basic invention. Claims 5 and 35, in suit, are for improvements thereon.

It will be useful at the present time to state briefly what Berliner's basic invention was. It is so well known in the art that the mere statement of it is at once recognized and accepted by those familiar with the art. A fair, though general statement of it is that made by Berliner's patent solicitor, Mr. Lyons, and accepted by the Patent Office. In the record on an appeal before the Circuit Court of Appeals in a suit between these complainants and the American Graphophone Company, based upon Berliner patent No. 548,623, of October 29, 1895, for improvements upon his basic patent No. 372,786, is a copy of the file wrapper and contents of the proceedings upon the application therefor. In the letter dated April 9th, 1895, Mr. Lyons argued that;—

"The Examiner should know Mr. Edison *never* produced a record of sound waves by *an*

> *undulatory groove of even depth*, but always by a smooth groove of undulatory depth. This is so well known that this applicant was granted a patent just for this mode of recording sounds. This is in fact the *essential difference between the gramophone and the phonograph*, and it would seem to be late in the day to be obliged to argue this point."

The Examiner in his letter of April 13, 1895, in reply, said;—

> "That the statement that the patent to Edison, No. 382,419, shows a phonogram blank having an undulatory groove of even depth representing sound-waves, is an erroneous one, is admitted. It occurred in the last office letter because of an inadvertence.
>
> "The differences between the patents to Edison and those to Berliner, are well known to the Examiner, and it is regretted that applicant should have felt it necessary to prepare such an elaborate argument at this late day."

While the file wrapper and contents of Berliner patent No. 548,623 are not in evidence in the suits at bar, nevertheless the patent to which Mr. Lyons referred, No. 372,786, of November 8, 1887, is in evidence, and that patent shows that the fundamental difference between the gramophone on the one hand, and the phonograph and graphophone on the other hand, is that the gramophone is an instrument for recording and reproducing sound by a method and apparatus, whereby the sound-record is made in non-resisting material in *grooves having lateral undulations of even depth, is copied in solid resisting material*, and is then used for the reproduction of the original sounds through the lateral vibrations of the reproducing stylus caused by the lateral undulations of even depth of the sound-record copied in solid resisting material. *This was Berliner's basic invention.* He so states in the article in the Electrical World for Nov. 12, 1887, in

evidence (p. 243), where he first describes his basic invention in the very words of patent No. 372,786, and then describes the improvements thereon set forth in Patent No. 564,586 for which he had just filed his application on Nov. 7, 1887. This article, Mr. Berliner testifies (p. 230), was prepared by him. All of Berliner's later patents, including the patent in suit and the claims in suit, 5 and 35 thereof, describe and claim merely *improvements*, upon the gramophone constituting the basic invention, designed to accomplish a *more perfect* recording and a *more perfect* reproduction of sound. As will appear from the following statement, made with reference to the proofs now before the court, the thirty-five claims of the patent in suit are all for *improvements* upon the basic invention, and although some of the thirty-five claims may be "broader" than others, nevertheless every one of the thirty-five claims are claims for improvements, and in no sense claims for the basic invention; and there is no principle or rule of law by reason of which claims 5 and 35 can be said to be in a category different from that of the rest of the thirty-five claims since they are all claims in the *category of improvements* upon the same basic invention for recording and reproducing sound.

As will be pointed out, Berliner himself expressly states in the patent in suit that its features of invention are "features of improvement" upon his basic invention. Had Judge Townsend had sufficient time to study the proofs and the authorities cited, he never could logically have reached the conclusion that claims 5 and 35 are claims for the basic invention, or that, being claims for the basic invention, they could survive other claims of the patent which, concededly, expired by reason of the expiration of prior foreign patents for the subject matter thereof; and he never would have been led to hold, for the first time in the history of the patent

law of this country, that, under §4887 of the Revised Statutes, letters-patent of the United States can have *a plurality of terms*, thus bringing endless confusion into the patent law and making it impossible for the public to know what is the term for which a patent is granted or what part of a patent has expired and what part has not expired.

> *(d). A comparison and analysis of the patent in suit and of Berliner's other patents, three of which granted to him for his inventions and the inventions of Werner Sucss are new evidence, show the limitations of the improvements claimed in claims 5 and 35 and in the other claims of the patent in suit.*

Before proceeding further and before considering the several defenses relied upon by defendants, it is necessary to understand clearly the invention described and claimed in the patent in suit No. 534,543, of February 19, 1895, to Berliner for "features of improvement" in the gramophone.

Berliner tells us at the outset that;—

> "My invention has reference to *improvements* in the *method* of and *apparatus* for *recording* and *reproducing* sounds, the *improvements being more particularly directed* to the construction of that kind of sound *recording* and *reproducing* apparatus which I have called gramophone, and for which letters-patent of the United States No. 382,790, dated May 15, 1888, have been granted to me" (p. 1, lines 8-16.)

Referring to Berliner's patent No. 382,790, dated May 15, 1888, it will be seen that Berliner there states (p. 1, lines 8-20) that the invention thereof is an improvement upon that described in the previous *basic* patent to Berliner, No. 372,786, of Nov. 8, 1887.

Referring to patent No. 564,586, of July 28, 1896,

to Berliner for gramophone, it will be seen that Berliner there states (p. 1, lines 8-39) that the invention of that patent has reference likewise to improvements upon his gramophone described in No. 372,786, of November 8, 1887.

Patent No. 372,786, issued November 8, 1887, original application filed May 4, 1887, divisional application filed September 26, 1887, was the first patent which Berliner obtained in the United States upon his gramophone, and it is apparent, therefore, from the references above cited, that Berliner's later patents, No. 382,790, of May 15, 1888, No. 534,543, of February 19, 1895, the patent in suit, and No. 564,586, of July 28, 1896, are for improvements upon the gramophone described in the original basic patent No. 372,786. In the suit of the Victor Talking Machine Company *et al.* against the American Graphophone Company on the patent in suit, No. 534,543, *Berliner's early patents No. 372,786 and No. 382,790 were not in evidence;* hence, the courts did not know what was the nature of Berliner's original gramophone or to what extent patents No. 534,543 and 564,586, described improvements thereon and therein. Nor did the courts know, as appears from Judge Hazel's opinion, to what extent the gramophone of Werner Suess, described in letters-patent No. 427,279, of May 6, 1890, issued to Berliner, assignee of Suess, was an improvement upon or departure from Berliner's early gramophone.

Like all other patents issued to Berliner for the gramophone, the Suess-Berliner patent No. 427,279, states that the invention thereof has reference to improvements upon Berliner's basic invention set forth in patent No. 372,786. The Suess-Berliner patent No. 427,279, says (p. 1, lines 8-21);—

"My invention has reference to improve-

> ments in the reproducing apparatus adapted for use in the method of recording and reproducing sounds set forth in Letters Patents No. 372,786, of November 8, 1887, and No. 382,790, of May 15, 1888, both granted to Emile Berliner. The whole apparatus used for the practice of the said method has been called the "gramophone," and in this class of sound recording and reproducing apparatus the record is ordinarily produced on the face of a rotating disk as a volute band consisting of a sinuous or *undulating groove of even depth.*"

Since, as stated above, Berliner patents No. 372,786 and No. 382,790 were not in evidence in the prior suit, Judge Hazel, had no means of knowing the extent of Suess's improvements and, therefore, concluded, upon the erroneous testimony of complainants' expert, that the extent of Suess's improvements was limited by the narrow claims of patent No. 427,279 and by certain language in the specification which, in the absence of the prior Berliner patents, was not intelligible; an erroneous conclusion, when the two prior Berliner patents mentioned and the *broad* claims of the Suess-Berliner Canadian patent, No. 41,901, here presented as *new evidence*, are read and considered. The essential point made and to be considered here, however, is that when Berliner filed his application for the patent in suit, No. 534,543, on March 30, 1892, he had already secured No. 372,786 on November 8, 1887, and No. 382,790 on May 15, 1888, and had, more than four years previously and on November 7, 1887, filed his application for No. 564,586, although the patent upon the application of November 7, 1887, did not issue until July 28, 1896. He had also secured for *Suess'* improvements Letters-Patent of the United States, No. 427,279, issued May 6, 1890, on an application filed August 6, 1889, and Letters-Patent of Canada, No. 41901, issued February 11,

1893, on an application filed May 5, 1891, which Letters-Patent of Canada for Suess' improvements Judge Townsend found (T. case, p. 340, fol. 1019; L & C case, p. 324, fol. 971), "*discloses and broadly claims the invention covered by the claims here in suit.*"

The application for the patent in suit, therefore, was filed several years later, at least four years later, than the application for any one of the other three Berliner patents above mentioned and considerably later than the application for either of the two Suess-Berliner patents mentioned. We should expect to find in the patent in suit, therefore, a statement that the invention of this patent consists in *improvements in details* of the gramophone; and such is the statement which Berliner makes in the first words describing the invention of the patent in suit, for at page 1, lines 17-36, he says;—

> "*One feature* of my invention has reference to *improvements* in the *method of recording sound* by tracing upon a fatty film deposited upon a metallic surface, undulatory lines, corresponding to sound waves, and then etching such lines in the metal base, or, as it is now commonly called, the record tablet; while the *other features* of my invention have reference to the *construction of the details of both the recorder and the reproducer of the gramophone.* Each of these *features of improvement* are designed to overcome certain difficulties, and to avoid certain imperfections *heretofore met with in the operation of the gramophone.* These difficulties and imperfections, and the manner in which they are avoided, will be particularly pointed out in the following detailed description with reference to the accompanying drawings, in which—"

In the specification Berliner first describes his improved recording machine as a whole (p. 1, line 51, to p. 3, line 2.) This improved record-

ing machine is illustrated in figures 1 and 2. The construction of the apparatus for the convenient application of alcohol, more alcohol than was used according to prior patent No. 382,790, during the process of recording, is the main feature here described of the improvement. Next Berliner describes the recording diaphragm and stylus or recorder (p. 3, line 3, to p. 3, line 109). The recorder is illustrated in figures 4 and 5 of the drawings and is shown in figures 1 and 2 as part of the recording machine. Next Berliner describes the mouth-piece shown in figure 8 (p. 3, lines 110-126). Next Berliner describes the use of the recording machine for the recording of sound with the aid of alcohol spread continuously, instead of once as in prior patent No. 382,790, upon the surface of the record tablet (p. 3, line 127, to p. 4, line 94). This operation is illustrated in Figure 1. Next Berliner describes the reproducing apparatus as a whole (p. 4, line 95, to p. 5, line 33). It will be noticed that although Berliner states that "*My* improved gramophone recorder is shown as a whole in figs. 1 and 2" (p 1, line 51), he does not state that the reproducing apparatus as a whole is his invention; but his language is, "*The* reproducing apparatus as a whole is represented in Fig. 3," (p. 4, line 95.) As will hereinafter be shown, the reproducing apparatus as a whole and the main features of the reproducing apparatus were, *according to Berliner's own statements*, and the incontrovertible fact, the invention of Werner Suess. Next Berliner describes the reproducing diaphragm and stylus or reproducer (p. 5, lines 34-102). The reproducer is illustrated in figs. 6 and 7, is shown as *part of the reproducing apparatus illustrated as a whole* in fig. 3, and embodies the *essence* of the improvements claimed in claims, 5 and 35, in suit.

Next come the claims of the patent, thirty-five in number. Claims 1-4 cover the continuous use of alcohol in the process of recording. A very narrow improvement, if any, upon the invention of prior patent, No. 382,790. Claim 5 covers an improvement in the method of reproducing sound, consisting in "*vibrating*" and "propelling" a stylus *as described*. Claims 6-16 cover the improved *recording* diaphragm and stylus or recorder. Claims 17-22 cover a new form of the horizontal rotary table, shown in the earlier application for patent No. 564,586 and in prior foreign patents. Claim 23 covers the mouth-piece shown in fig. 8. Claims 24-34, except claim 31, which is for the *recording* stylus, are for the improved *reproducing* diaphragm and stylus or reproducer, claim 25 covering also the improved *recording* diaphragm and stylus. Claim 35 covers an improvement in the reproducing apparatus, a *travelling* tablet having a sound record formed thereon and a reproducing stylus, shaped for engagement with the record as in claim 32 and free to be *vibrated* and propelled *as described*. Such then are the description and claims of the patent in suit covering *as one feature*, the improvement in the method of recording and covering, *as the other features*, the construction of the "*details*" of both the recorder and the reproducer of the gramophone, and constituting *improvements* upon the method of, and apparatus for, recording and reproducing sound set forth in the *basic patent* No. 372,786.

As will hereinafter be shown, the patent in suit has expired, and claims 5 and 35 were anticipated by Werner Suess and Edison *unless* claims 5 and 35 are limited by the improvements in the details of the reproducer, whereby the stylus, provided with a *wedge-shaped point*, so shaped for engagement with the record, is permitted to be *vibrated in the manner described*.

A comparison of Figs. 1 and 2, which show Berliner's improved gramophone recorder as a whole, with Figs. 4 and 5, which show the details of improvement in the recorder, makes it clear that the improvements in the "*details of the recorder*" are incorporated in the improved gramophone recorder as a whole and form a *substantive* part thereof. So a comparison of Fig. 3, which shows the reproducing apparatus as a whole, not claimed by Berliner to be his invention, with Figs. 6 and 7, which show the details of improvement in the reproducer, makes it clear that the improvements in the "*details of the reproducer*" are incorporated in the reproducing apparatus as a whole and form a *substantive* part thereof, and are, indeed, the essence of the improvements in the reproducing apparatus for which, together with the improvements in the details of the recorder, Berliner applied for the patent in suit. *As hereinafter shown the reproducing apparatus shown as a whole in Fig. 3 and its method of operation were unquestionably the invention of Werner Suess, and Berliner so stated, when as Suess' assignee he applied for and obtained Canadian patent therefor No. 41901, issued Feb. 11, 1893, applied for May 5, 1891.* JudgeTownsend, moreover, so found, for he states in his opinion that the Suess-Berliner Canadian patent "*discloses and broadly claims the invention covered by the claims here in suit.*"

From the foregoing analysis and consideration of the patent in suit, it appears, without question, that the *improvements* described and claimed relate, *first*, to the recording of sound, and, *second*, to the reproducing of sound. It is impossible seriously to contend that the essence of the improvements consists rather in the *reproduction* of sound than in the *recording* of sound. It is just as essential, in the practice of Berliner's improve-

ments to record the sound as it is to reproduce the sound after the sound has been recorded; indeed, it might with more reason be contended that the recording of sound, according to the *improvements* described and claimed in the patent, is the more essential, since, as is self-evident, a reproduction of sound can be had only after the sound has been recorded. Upon what theory, then, did the Circuit Court hold that the reproduction of sound by the method and apparatus of claims 5 and 35 was a more important or the principal part of the improvements of the patent? It would be as reasonable to hold that of the two factors, 5 and 2, of 10, 2 is the more important, as to hold that of the improvements of the patent the reproducing of sound is more important than the recording of sound. Each factor of 10 is essential and equally important in the process of multiplication whereby the product, 10, is obtained, for without either factor the product cannot be obtained; so in practising the improvements of the patent the recording of sound and the reproducing of sound are alike essential and important. Reproduction of sound, moreover, had previously been accomplished by Berliner's gramophone, in its original form shown in basic patent No. 372,786. The use of the improved method and apparatus claimed in claims 5 and 35 was intended, therefore, to accomplish merely a *more perfect* reproduction of sound and claims 5 and 35 are, therefore, claims for *improvements only.*

But the Circuit Court, as appears from the opinion, seems to have considered not only that the reproduction of sound is more important than the recording of sound in practising the improvements of the patent in suit, but also that claims 5 and 35 of the patent, which relate to a method of and apparatus for reproducing sound, are more im-

portant than all the numerous other claims of the patent relating to the reproduction of sound, notwithstanding the fact that claims 5 and 35 rest upon and are permeated with the improvements set forth in the other claims for reproduction, and notwithstanding Berliner's express statement that the "details" of improvement in the reproducer together with the "details" of improvement in the recorder constitute principal "*features of improvement.*"

> (*e*). *The expression "principal invention" was used by the Supreme Court in Siemens' Adm'r v. Sellers, 123 U. S. 276, merely to designate one of two inventions, and not as a ground of decision. The Circuit Court erred in refusing to follow the principle of the decision in that case and in holding that the patent in suit has a plurality of terms.*

The expression "principal invention" was used by the Supreme Court to denote a primary or first invention upon which improvements had subsequently been made. This was in the case of *Siemens' Adm'r* v. *Sellers*, 123 U .S. 276, where it was held that a United States patent was limited as to its term by a prior English patent because both patents claimed "*an*" invention, which in that case happened to be the original, primary or principal invention upon which improvements, constituting a further and other invention, had subsequently been made and incorporated into the United States patent. *The expression "principal invention" was used in antithesis to "improvements" upon that invention, merely to refer to and to point out AN invention which was found in both the United States patent and in the prior English patent;* but the relative importance of the primary invention and of the invention consisting

of improvements upon it was not considered or stated by the Supreme Court and in no sense entered into the decision of the case, for the Supreme Court expressly said, that a patent "*cannot be construed as running partly from one date and partly from another. This would be productive of endless confusion.*" In other words the Supreme Court squarely held that if a United States patent expires as to one or more of its claims for *an* invention for which it was granted, it must expire as to all of its claims, no matter what they are or what may be the invention which they cover. A United States patent, therefore, must have a *single* term, which cannot, where the United States patent is "granted for *an* invention" (Rev. St. §4887) previously patented in a foreign country, exceed the shortest term of the terms of the prior foreign patents. But the Circuit Court in the suits at bar, refusing to follow the decision of the Supreme Court to the effect that a patent "cannot be construed as running partly from one date and partly from another" has held that although the patent in suit has expired as to many or most of its thirty-five claims, it, nevertheless, survives as to the two claims, 5 and 35, in suit. *For the first time in the history of the patent law of this country it has been held, contrary to the clear provision of §4887 of the Revised Statutes and to the decision of the Supreme Court in Siemens' Adm'r v. Sellers, supra, that a patent can be construed as having a plurality of terms and as running partly to one date and partly to another and that the endless confusion necessarily resulting therefrom is, in effect, a matter of no consequence.* As will hereinafter be more fully shown, the Circuit Court erred in so holding. At the present time it is intended merely to point out that under §4887 of the Revised Statutes, the relative importance of the

subject matter of various claims of a patent is not controlling; and that it cannot reasonably be held or said of the claims of the patent in suit either that the claims which cover the reproduction of sound are more important than those which cover the recording of sound, or that among the several claims covering the reproduction of sound any tenable ground exists for holding that the two claims in suit, 5 and 35, are more important than the others which cover principal and essential features of improvement of the patent according to the express statement of the patentee. *They are all claims for improvements, stand in the same category, and are subject to the same rule of law, as to expiration under the Statute.*

The Revised Statutes (§4887) provide;—

> "But every *patent* granted for *an* invention which has been previously patented in a foreign country *shall be so limited* as to expire at the same time with the foreign patent."

This provision fixes the *term* of the home *patent*, which shall expire with the expiration of the term of the prior foreign patent.

> *(f). Berliner basic invention is set forth in his basic patent No. 372,786.*

Berliner had made his *basic* invention when, on May 4, 1887, he applied for patent No. 372,786, issued November 8, 1887. *No earlier statement of Berliner's basic invention has so far been produced.* Patent No. 372,786 is for a gramophone and the invention thereof "has reference to a *novel* method of and apparatus for recording and reproducing all kinds of sounds" (p 1, lines 8-10). In this patent Berliner first describes the *ordinary* method of recording spoken words or other sounds for reproduction by means of *vertical* vibrations of the recording stylus, and points out the alleged diffi-

culties and disadvantages thereof (p. 1, lines 14-75). He then states that according to his invention, which he is describing, the recording stylus vibrates *laterally* or parallel with the record surface (p. 1, lines 76-97). He then describes his gramophone machine, his record surface and the manner of recording sound by means of the lateral vibrations of the recording stylus (p. 1, line 96 to p. 2, line 97). He says, (p. 2, line 80);—

> "Under the impact of the sound-waves the diaphragm is set into vibrations, whereby the free end of the stylus is also caused to vibrate to the right and left of its normal position, removing at the same time an undulating line *y*, of lampblack from the record surface, as indicated, greatly exaggerated, in Fig. 5."

Berliner then describes how the phonautographic record thus obtained *is copied* for the reproduction of the sound "in *solid resisting material*, preferably metal, either by the purely mechanical process of engraving, or by *chemical deposition*, or by photo-engraving. * * * The copy thus obtained, which may be multiplied to any desired extent, is a grooved wave-line upon a strip or sheet of copper or other metal, as shown in Figs. 1, 4, 6, and 7, and for the reproduction of the recorded sounds it has the advantage over the ordinary records in tin-foil, wax, &c., that it is not sensibly attacked by the reproducing-stylus, and will stand an indefinite number of reproductions *without the slightest variation in the accuracy and loudness of the reproducing sounds*" (p. 2, line 98 to p. 3, line 21, p. 2, lines 111-130). He then says, with reference to the reproduction of sounds, (p. 3, lines, 10, 22-33);—

> "If, now, the drum is rotated with uniform speed, the end of the stylus will be *forced to follow* the undulations of the groove *y*, and *the*

diaphragm will be vibrated positively in both directions in strict accordance therewith, and will therefore reproduce the exact sounds which originally produced the record. This peculiarity of positive vibratory movement in both directions of the diaphragm is a feature which also *distinguishes my method and my apparatus* from others heretofore used.

"In the phonograph and graphophone the end of the *reproducing* stylus which bears upon the indented or engraved record has a vertical, upward and downward movement. . . . *In my improved apparatus the stylus travels in a groove of even depth and is moved positively in both directions.*"

(*g*). *Method of reproducing sound according to Berliner's basic invention. The method employed by defendants is an improvement thereon.*

A comparison of Berliner's gramophone, shown in Fig. 1 of patent No. 372,786, with Scott's phonautograph of 1857, shown in Fig. 1 of Berliner's lecture before the Franklin Institute (p. 249), shows that Berliner's gramophone in its original form was a modification of Scott's phonautograph, the cylinder of which, bearing the record, was moved forward under the stylus by a feed-screw (p. 249). The use of the feed-screw for such purpose was well known in the prior art. Judge Hazel found that in the Bell & Tainter machine of the prior art (see patents Nos. 341,214 and 341,288):

"An auxiliary joint or feed-screw was necessary, as already stated, to effectuate the required passage of the record over the point of the stylus, *or* to cause the stylus and reproducer diaphragm to travel across the surface of the record" (p. 68, fol. 202).

Such use of the feed-screw is shown also in the

earlier patents to Edison No. 200,521; No. 215,554; No. 227,679; and No. 1644 of 1878 of England; to Hall, No. 219,939; to Reynolds, No. 287,166; and in all the patents of the prior art contained in the records in the suits at bar. The article in the Electrical World for Nov. 12, 1887, (p. 255), prepared by Berliner (p. 230, fol. 690), shows, in Fig. 1, an early form of the gramophone employing a feed-screw for recording *and* reproducing.

Not till the autumn of 1894, Mr. Berliner testifies (p. 240, fol. 719), were talking machines "sold, in which a feed screw for the purpose of propelling the reproducing sound box across the record was dispensed with." He further testifies (p. 241, fol. 723) that an "apparatus in which the record groove both propels and vibrates the reproducing stylus or sound box * * practically means to the exclusion of a feed screw * * ".

The essence of Berliner's basic invention set forth in patent No. 372,786 consisted in copying, in solid resisting material, the phonautographic record of Leon Scott, and then placing such record upon the gramophone, which was a modified phonautograph, and reproducing the sound by and in accordance with the copy of the original record. (See claims 1-3 and p. 1, lines 87-97, of patent No. 372,786). *The idea of "propelling the stylus in the groove across the surface of the record without a feed screw or other mechanism"*, to quote Judge Hazel's words, *was no part of Berliner's basic invention and is nowhere suggested in his earliest patent for his basic invention No. 372,786. Reproduction was had by other well known means.* The discarding of the feed-screw and the permitting of the record groove to propel the stylus across the face of the record, if it was not invented by Edison (see Figs. 31 and 37 and p. 8, lines 48-53, p. 9, lines 11-14, of English patent

1644 of 1878), was a later *improvement* upon the basic invention and an improvement which Berliner, in the Suess-Canadian patent, tells us was made not by him but by Suess. The propelling of the reproducing stylus without a feed-screw in the manner described, Judge Townsend found, was described and claimed by *Berliner*, as the invention *of Suess*, in Canadian patent No. 41,961; but whoever may have invented it, and this is the point, it was an *improvement*, consisting in the discarding of the feed-screw previously employed, in the reproduction of sound.

> (*h*). *No matter what may be the construction given to claims 5 and 35, the two claims, like all the other claims of the patent in suit, are claims for improvements merely.*

In practising the method and in using the apparatus of claims 5 and 35 there are retained and used all the *fundamental features* of the gramophone of Berliner's basic invention patented by him in his first United States patent No. 372,786 and in his early foreign patents hereinafter mentioned; therefore, upon the argument of the prior suit before the Circuit Court of Appeals, it was contended on behalf of complainants that the *novel feature* or improvement residing in the claims and giving them patentability consisted in the propelling of the stylus across the face of the record without any external mechanical appliance, such as a feed-screw, and by means of the pressure exerted upon the stylus by the walls of the rotating record-groove. Concededly, there was no novelty in vibrating the stylus by and in accordance with the record, but, it was argued, there was novelty in discarding the feed-screw so as to permit the walls of the rotating record-groove to propel the stylus across the face

of the record. The difference between propelling, by means of a feed-screw or other like mechanism, the reproducing stylus across the face of the record or the record over the point of the stylus, concededly a method well known in the prior art, and propelling the stylus across the face of the record without such aid, the feed-screw being discarded, was discussed, upon the argument, by the court and counsel. The difference was stated to consist in the discarding of the feed-screw of the early phonograph and graphophone, which feed-screw Berliner used in the early gramophone, and in permitting the pressure of the walls of the rotating record-groove to propel the stylus across the face of the record. Therefore, no matter what may be the construction given to claims 5 and 35, it must remain true that the method and the apparatus of the two claims constitute merely an improvement upon Berliner's original gramophone which embodied his basic invention, consisting in recording sounds by means of lateral undulations of even depth, in non-resisting material, then copying the same for reproduction in solid resisting material, and then reproducing the sounds from such copy, all in the manner and by the apparatus described and shown in his first United States and foreign patents. The two claims, therefore, are, like all the other claims of the patent, claims for improvements.

> (*i*). *In the prior suit, the Circuit Court of Appeals and the Circuit Court, not having Berliner's basic patent No. 372,786 before them, assumed, the point not being important there as it is here, that patent No. 564,586 was Berliner's basic patent.*

The Circuit Court of Appeals, concurring in the opinion which Judge Hazel wrote, except as to

the question of prior public use, held, on that question, that the defense of prior public use interposed by the American Graphophone Company was not valid because, (1) although the patent in suit was not applied for until March 30, 1892, the specifications of Berliner's application for patent No. 564,586, applied for November 7, 1887, were full enough to warrant the making of the claims in controversy (5 and 35); (2) the application for the patent in suit might fairly be considered a continuation of the application filed November 7, 1887, for patent No. 564,586; and (3) Berliner's application thus antedated the public use in question. It is clear from Judge Hazel's opinion, that Judge Hazel, not having Berliner's basic patent No. 372,786 before him, assumed, the point not being important there as it is here, that Berliner's patent No. 564,586, applied for November 7, 1887, was the basic patent, for in the course of his opinion he said (pp. 66-67, fols. 198-200);—

> "In the patent to Emile Berliner, No. 564,586, issued on July 28, 1896, application filed November 7, 1887, the process of recording and reproducing sound vibrations differs essentially from the method used in the phonograph and the graphophone. The specification described a process by which the sounds were inscribed upon a layer of non-resisting material; which was afterwards copied in a non-yielding material, from which the sounds were reproduced. The specification says:
>
> > 'The original record, as well as the copy of the same, is thus obtained as *an undulatory line of even depth*, as distinguished from the line of varying depth obtained by the ordinary phonograph and graphophone.'
>
> "It is not disputed that such mode or process was a *new* and meritorious invention and that

> it was not merely a patent for the functional effect of the machine in connection with which it was used. The earlier specification does not claim the method nor the details of construction of the claims in controversy; hence it is contended by the defendant, as will presently appear, that there was a surrender or waiver thereof. In the patent in suit two features of the invention are mentioned, one concerning the process or mode of recording sound upon a record, the other as to the construction of the apparatus."

But the process by which the sounds were inscribed upon a layer of non-resisting material in an undulatory line of even depth and afterwards copied in a non-yielding or solid resisting material and reproduced was the process described and claimed in the original basic patent No. 372,786 of Nov. 8, 1887, which expired November 8, 1904.

> *(j). Berliner's prior foreign patents further prove that claims 5 and 35, like all the other claims of the patent in suit, cover only improvements upon his basic invention.*

Reference to Berliner's foreign patents, hereinafter more fully considered, *none of which were in evidence in the prior suit*, will make still more clear what was Berliner's basic invention and the order in which Berliner made his basic invention and his improvements thereon.

In England, Berliner obtained two patents, No. 15,232 of Nov. 8, 1887, and No. 7204 of May 15, 1888. The first, No. 15,232 of 1887, covers the subject matter of United States patents No. 372,786 of November 8, 1887, and No. 564,586 of July 28, 1896, applied for November 7, 1887.

Clearly, therefore, as appears from and *as is stated in this English patent* (p. 5, line 4), the invention of United States patent No. 372,786 was Berliner's basic invention and the invention of

United States patent No. 564,586 was an *improvement* thereon. If, as the Circuit Court of Appeals held, the invention of the patent in suit, contained in claims 5 and 35 thereof, was a part of the invention described in patent No. 564,586, it is impossible to hold that the patent in suit is for Berliner's basic invention. In order to carry the date of the invention contained in claims 5 and 35 of the patent in suit back to November 7, 1887, the specification of patent No. 564,586 was and is alone relied upon. But patent No. 372,786 was previously applied for on May 4, 1887, and Berliner himself states in all his subsequent United States and foreign patents that the inventions thereof were *improvements* upon his first patent for his basic invention set forth in No. 372,786.

Berliner's second English patent No. 7204 of May 15, 1888, corresponds to his second United States patent No. 382,790 of May 15, 1888.

Berliner's first French patent No. 186,827 of November 8, 1887, and Berliner's first German patent No. 45048 of November 8, 1887, set forth and claim the subject matter of his first English patent No. 15,232 of November 8, 1887.

Berliner's second French patent No. 190,602 of May 15, 1888, and his second German patent No. 47099 of May 16, 1888, set forth and claim the subject matter of his second English patent No. 7204 of May 15, 1888.

But Berliner's *third* French patent No. 207,090 of July 19, 1890, sets forth and claims the improvements in the *recorder and reproducer* which, as Berliner says in the patent in suit, constitute principal features of invention of the patent in suit. And in like manner Berliner's *third* German patent No. 53,622 of November 20, 1889, sets forth and claims the improvements in the *reproducer* which, as Berliner states in the patent in suit,

constitute principal features of invention of the patent in suit.

It may be well to note that the claims of Berliner's basic United States patent No. 372,786 cover the method of *recording* and *reproducing* spoken words and other sounds in the manner described and by the apparatus shown in the drawings. Berliner's first German, English and French patents, which also cover his basic invention, claim the method of recording and reproducing sounds according to his basic United States patent, and the apparatus shown by identical figures 1-7 in the first United States, German, English and French patents mentioned. For instance, claim 2 (p. 143) of Berliner's first German patent No. 45048 of November 8, 1887, covers the gramophone shown in patent No. 372,786 for recording, and claim 3 of said German patent covers the same gramophone for the reproduction of sound. The drawings of the first German patent No. 45048 are identical with the drawings of the first English patent No. 15,232, (stipulation, T. case, p. 554, fol. 1662; L & C case, p. 540, fol. 1620). Berliner's first French patent No. 186,827 of November 8, 1887 (p. 123) is identical with the first English patent No. 15,232. Claims 9, 10, 11, 12, 13 and 15 of English patent No. 15,232, of November 8, 1887, cover the gramophone and the sound record of United States patent No. 372,786. In addition the said German, French and English patents claim and show in Figs. 8-16, the improvements set forth in United States patent No. 564,586 upon Berliner's basic invention. In English patent No. 15,232 (identical with French patent No. 186,127) at page 3, lines 4-40, etc., it is said that the gramophone shown in Figs. 1-7 is the "*original*" gramophone and that that shown in Figs. 8-16, while retaining all the fundamental features of the original, is an "*improve-*

ment" thereon; and in German patent No. 15048 (p. 137, fol. 409), the gramophone of Figs. 1-7, identical with the gramophone of the same figures in U. S. patent No. 372,786, is said to contain the fundamental principles of the gramophone and that of Figs. 8-16, identical with that of Figs. 1-9 of U. S. patent No. 564,586, is said to be a new form of apparatus containing improvements upon the first.

> (k). *Claims 5 and 35, construed in the light of the new evidence presented in the records of the suits at bar, are limited to improvements, and to improvements in the details of construction of the reproducer. The Circuit Court erred in holding that these claims cover a basic invention.*

In the light of these facts, which were not before the courts in the prior suit, it is clearly incorrect to say, and the Circuit Court erred in holding, that the invention or any part of the invention of the patent in suit was Berliner's basic invention. *The patent in suit is*, as Berliner himself expressly states, *a patent for improvements upon his basic invention*, consisting in improvements in the method of recording and in the details of construction of his apparatus for recording and reproducing sound. *Claims 5 and 35 of the patent in suit must be construed in the light of this new evidence now first presented to the court, and, as will hereinafter be clearly shown, if claims 5 and 35 are to be held to have been valid at all, they must be limited by the improvements in the details of construction of the reproducer.*

> (l). *Defendants do not use the improved reproducer of the patent in suit.*

The improvements in the details of construction of the reproducer have never been used by either of the defendants. This appears from a comparison of

the reproducers of defendants' machines with Figs. 6 and 7 of the patent in suit. They use the reproducer of Suess-Berliner Canadian patent, shown in Fig. 1 of the drawings of that patent, which by stipulation (T. case, p. 555; L. & C. case, p. 541) are the same as the drawings of patent No. 427,279.

(m). Berliner's basic invention and his and Suess' improvements thereon, shown by the patents in evidence, were all patented in foreign countries, before the grant of the patent in suit, by patents which have all expired. Berliner's home patents for his same basic invention and improvements thereon have also expired. The holding of the Circuit Court that claims 5 and 35 can alone still survive is contrary to the plain meaning, and contrary to the equity, of § 4887 of the Revised Statutes.

The patent in suit had expired before either of the suits at bar was begun and before the motions for preliminary injunction were made, by reason of the expiration of several prior foreign patents taken out by Berliner for "an invention," for which the patent in suit was granted. The Berliner-Suess Canadian patent No. 41,901, of February 11, 1893, covered broadly the subject matter of claims 5 and 35 in suit unless those claims are limited by the improvements in the details of construction of the reproducer. This Canadian patent was granted for a term of six years and expired on February 11, 1899, with the expiration of the term for which the patent was granted. Berliner German patent No. 53,622 of November 20, 1889, covered improvements of the patent in suit relating to the reproduction of sound and expired on November 7, 1902. Berliner French patent No. 207,090, of July 19, 1890, covered improvements of the patent in suit for the recording and for the reproduction of sound and expired on July 19, 1905. Berliner English

patent No. 15,232, of November 8, 1887, expired November 8, 1901. Berliner French patent No. 186,827, of November 8, 1887, expired November 8, 1902. Berliner German patent No. 45,048, of November 8, 1887, expired November 8, 1902. These three English, French and German Berliner patents cover the inventions of Berliner's basic United States patent No. 372,786, of November 8, 1887, and of his United States patent No. 564,586, of July 28, 1896, and, therefore, the invention of claims 5 and 35 of the patent in suit, which the Circuit Court of Appeals held, are broad claims for the invention set forth in patent No. 564,586. Berliner's basic United States patent No. 372,786, of November 8, 1887, expired November 8, 1904, with the expiration of the seventeen year term thereof. Berliner's second United States patent No. 382,790, of May 15, 1888, expired May 15, 1905, with the expiration of the seventeen year term thereof. Berliner's foreign patents corresponding to his United States patent No. 382,790, have also expired as follows; No. 7204, of May 15, 1888, of England on May 15, 1902; No. 190,602, of May 15, 1888, of France on May 15, 1905; and No. 47,099, of May 16, 1888, of Germany on November 7, 1902. Berliner's United States patent No. 564,586, of July 28, 1896, expired on November 8, 1901, with the prior English patent for the same invention, No. 15,232, of November 8, 1887. *The result is that Berliner's inventions for the recording and reproducing of sound by means of the gramophone, including his basic invention and improvements thereon, have become free to the public in the United States and foreign countries.* Not one of the patents mentioned still survives. Under such circumstances the holding of the Circuit Court in the suits at bar that claims 5 and 35 of the patent in suit still survive is contrary, not only to the express provisions of §4887 of the Revised Statutes, but also to the equity and manifest intention of the

Statute. It is also contrary to the decision of the Supreme Court in *Siemens' Adm'r v. Sellers, supra*, that a patent "cannot be construed as running partly form one date and partly from another. This would be productive of endless confusion." It is contrary to the decision of Judge Severens in *Western Electric Co. v. Citizens' Tel. Co.*, 106 Fed. 215, 219, that a "patent cannot expire in parcels", and of Judge Brown in *Sawyer, Spindle Co v. Carpenter*, 133 Fed. 238, 240, that a patent cannot "expire in part, and survive in part," following *Siemens, Adm'r* v. *Sellers, supra*. It is a decision which construes claims (5 and 35) for improvements to be claims for the basic invention and then holds that the claims so construed survive the expiration of *all* Berliner's prior foreign patents, not only for his improvements but also for his basic invention. It is the first decision in the history of the patent law of this country to the effect that a United States patent can, under § 4887 of the Revised Statues, have *a plurality of terms for the different claims thereof*. It is a decision which, if upheld, will produce the endless confusion which the Supreme Court has said is a sufficient reason against such an interpretation of § 4887 of the Revised Statutes.

(*n*). *Conclusion of Point One.*

Such, may it please the court, is a general statement of the subject matter of the patent in suit and the facts relevant thereto. The defenses indicated in the course of the foregoing general argument, together with other defenses relied upon by defendants, are dealt with in the following points, wherein the facts and the authorities relied upon are set forth.

POINT TWO.

Berliner patent in suit No. 534,543, of February 19, 1895, was granted for an invention previously patented by Berliner in Germany, by Berliner German patent No. 53,622, of November 20, 1889. The term of the patent in suit, therefore, expired with the expiration of the term of the prior German patent on Nov. 7, 1902, before either of these suits was begun. Section 4887 of the Revised Statutes considered and the authorities collated.

(a). German patent No. 53,622 is new evidence. Defendants' affidavits show that it was granted for an invention for which the patent in suit was granted.

German patent No. 53,622, of Nov. 20, 1889, to Berliner, was not set up in the answer or offered in evidence in the prior suit. It is new matter absolutely. A certified copy of the patent forms part of defendants' exhibits (stipulation, T. case, p. 556; L. & C. case, p. 542). A copy of the drawings and a translation of the specification of the patent are to be found in the record (pp. 150-154).

That the invention described and covered by the German patent is an invention described and covered by the patent in suit and for which the patent in suit was granted, is shown by defendants' affidavits (Aff. Hicks, pp. 82-86, fols. 245-256; aff. Ensign, pp. 99-101, fols. 297-303; aff. Lessls, pp. 116-118, fols. 348-352.)

(b). German patent No. 53,622, being a patent for an improvement, expired on Nov.

7, 1902, according to the German law, with the patent for the invention upon which the improvement was made.

A copy of the material parts of the German Patent Law is included in defendants' exhibits (p. 179).

According to the German law, the duration of a patent is fifteen years, but if an invention is an improvement upon another invention patented in favor of the applicant, a patent of addition only can be obtained, which terminates with the patent for the original invention (p. 179, fols. 537-538). It appears upon the face of German patent No. 53622, that it is a second patent of addition to patent No. 45,048, of November 8, 1887, which patent No. 45,048 also forms one of defendants' exhibits together with a translation thereof (p. 132). Patent No. 53,622, therefore, expired November 7, 1902 with patent No. 45,048, and that the term of the patent No. 53622 was limited to expire on November 7, 1902, is stated on the face of the patent. The certificate of the German Patent Office also states that patent No. 53622 has been cancelled in the rolls (p. 151, fol. 451.)

(*c*). *The description and claims of the patent in suit for the invention previously patented by the German patent.*

What then is the invention described and claimed in German patent No. 53,622 and also in the patent in suit No. 534,543? A comparison of figures 6 and 7 of the patent in suit with figures 1 and 2 of the German patent shows that the reproducer illustrated in the patent in suit is identical with the reproducer illustrated in the German patent. As stated under Point One the reproducer of the patent in suit illustrated in figures 6 and 7 thereof is described at page 5, lines 34-102. The reproducer

consists of a diaphragm and stylus. The diaphragm 92 is mounted in a casing 91. A leaf spring 101 carries the stylus 112. The leaf spring is bent or twisted at right angles at 102, so that the face of one part of the leaf spring is perpendicular to the face of the other part of the leaf spring. The leaf spring faces with its flat side the face of the diaphragm up to a point beyond the center of the diaphragm, and is secured at one end to the diaphragm casing. The other end of the leaf spring crosses the diaphragm casing at a point opposite to the point at which the flat end is fixed, and is, as above stated, perpendicular to the face of the flat part of the leaf spring which is fixed to the diaphragm casing. As stated in the patent in suit (p. 5, lines 53-54), "the spring is therefore elastic in two directions at right angles to each other." At the point where the leaf spring passes over the center of the diaphragm, it is by means of a screw pin 106, connected with the center of the diaphragm, and nuts are provided whereby the *tension* between the diaphragm and the leaf spring can be regulated (p. 5, lines 61-71). The end of the leaf spring which crosses the diaphragm casing is not secured thereto, but is free to vibrate and it is called the free end, 103, of the spring. To the free end of the spring a binding post, 111 is secured in which the reproducing stylus, 112 having a wedge-shaped point is held by a set screw 113 (p. 5, lines 72-76.) In order to reduce the volume of the emitted sound or to render it more clear, one or more perforated diaphragms 114, may be placed in the neck 90 leading from the diaphragm casing (p. 5, lines 90-102.) In order to dampen the individual vibrations of the leaf spring, soft rubber cushions, 104, may be placed upon the leaf spring (p. 5, lines 60-61). The tendency of the leaf spring 101 is to press toward the

diaphragm and the edge of the part 103 which crosses the diaphragm casing bears against the diaphragm casing 99 and also against the block 100 (p. 5, lines 47-54.) Such are the features of the reproducer of the patent in suit and these features are covered specifically in claims 24-34. The features of the reproducer are also covered by claims 5 and 35 which are limited by, and depend for their novelty upon, a stylus "vibrating" and "free to be vibrated," *substantially as described*, and having a "*wedge-shaped point*" that is a point so "*shaped for engagement with said record.*" Since a recording stylus may also be reproducing stylus, claim 31 can be read upon the reproducer shown in figures 6 and 7. Claims 24-34 summarize the specific points of the reproducer and are as follows:

> "24. In a gramophone a sound reproducing diaphragm in combination with a stylus lever extending diametrically across the same, and elastic in two directions at right angles to each other, substantially as described.
>
> 25. In a gramophone, the combination of a diaphragm and a stylus carrier composed of a leaf spring twisted at one point so as to bring the edge of the one portion at right angles to the face of the other portion, whereby it is elastic in two directions, substantially as described.
>
> 26. In a gramophone the combination of a reproducing diaphragm and stylus; with a stylus carrier composed of a leaf spring extending flatwise over the face of the diaphragm and edgewise over the edge of the diaphragm, substantially as described.
>
> 27. In a gramophone the combination of a reproducing diaphragm mounted in a suitable frame the latter being provided at one point with a boss or stop; with a double elastic stylus carrier composed of a twisted leaf spring tend-

ing toward the diaphragm and against the boss or stop, substantially as described.

28. In a gramophone, a reproducing diaphragm and stylus in combination with an elastic stylus carrier extending over the face of the diaphragm and tending toward the same, of an adjustable connection between the diaphragm and stylus carrier and adjustable for varying the pressure between diaphragm and style carrier, substantially as described.

29. In a gramophone the combination of a reproducing diaphragm mounted in a suitable frame provided with a boss or stop; with a double elastic stylus carrier tending toward the diaphragm and toward the stop and elastic non-resonant dampers interposed between the style carrier and the frame and stop, substantially as described.

30. In a gramophone a sound reproducing diaphragm and a sound conveying tube for the same, with one or more non-resonant perforated diaphragms in the said tube for reducing the volume of sound conveyed to the ear, substantially as described.

31. In a gramophone a recording stylus pivoted to move in response to the vibrations of a diaphragm and elastic in a plane at right angles to such motions, substantially as described.

32. In a gramophone, a reproducing stylus having a wedge-shaped point engaging the walls of the record groove, substantially as described.

33. In a gramophone reproducer, a stylus carried or formed by a spring fixed at one end to the diaphragm holder and freely extending across and beyond the same and operatively connected with the center of the diaphragm, substantially as described.

34. In a gramophone reproducer, a spring constituting or carrying a stylus, fixed at one end to the diaphragm holder and extending

> across and beyond the periphery of the same and freely pressing against the diaphragm, substantially as described."

Claims 5 and 35 read as follows:

> "5. The method of reproducing sounds from a record of the same which consists in *vibrating* a stylus and propelling the same along the record by and in accordance with the said record, *substantially as described.*
>
> 35. In a sound reproducing apparatus consisting of a traveling tablet having a sound record formed thereon and a reproducing *stylus shaped for engagement with said record* and *free to be vibrated* and propelled by the same, *substantially as described.*"

Obviously, a reproducer consisting of a diaphragm and stylus mounted thereon in the manner described has for its object the lateral vibrations of the stylus carried by the free end of the leaf spring. Judge Hazel held this to be of the essence of the invention.

Judge Hazel said, (p. 67);—

> "Complainants contend, and the proofs show, that the stylus attached to the diaphragm is arranged so as to permit the same to vibrate laterally and that owing to lateral undulations in the walls of the record groove, a desirable swaying motion is imparted to the reproducer diaphragm."

Indeed, a stylus carried by a leaf spring so constructed and so mounted could vibrate in no other manner than laterally, and, as the specification states (p. 5, lines 27-29), the stylus and diaphragm vibrate "in accordance with the undulations of the record groove," which undulations are lateral and not vertical. The "*vibrating*" stylus of claim 5, and the reproducing stylus "*free to be vibrated*" of claim 35, each "*substantially*

as described" is, of course, the stylus mounted upon the leaf spring of the reproducer claimed specificially in claims 24-34. Furthermore the "*stylus shaped for engagement with said record*" of claim 35, is the "*reproducing stylus having a wedge-shaped point engaging the walls of the record groove*" of claim 32.

(*d*). *The description and claim of the prior German patent for an invention for which the patent in suit was granted. Judge Townsend found that the invention described and claimed in the German patent is described and claimed in the patent in suit.*

Referring now to the specification and drawings of German patent No. 53,622, there is the same diaphragm casing *cc'* which holds between its parts the same diaphragm *b*. There is the same leaf spring *aa'*, consisting of two parts, one the flat part fastened to the diaphragm casing at *g*, and the other twisted so that its face is perpendicular to the face of the flat part and it is free to vibrate. The free end of the leaf spring carries the stylus *k*, *having a wedge-shaped point, shaped for engagement with the record*. The stylus *k* is secured to the leaf spring in the same manner by means of a block *h*, made fast to the leaf spring, and a set screw *i*. Just as in the United States patent, the leaf spring is connected with the diaphragm by means of a pin *m*, and nuts and screws, *n*, *f* and *e*, serve to regulate the *tension* between the leaf spring and the diaphragm, just as the *tension* between the leaf spring and the diaphragm is regulated in the United States patent. In order to obtain a dampening of the leaf spring, the free end of the leaf spring is surrounded by a ring of rubber, *s*, just as in the United States patent. The tube *d* leads from the diaphragm

casing but is cut off so that the perforated tube, shown in the corresponding French patent next to be considered and in the United States patent, does not appear. Without question, the invention shown in the German patent is shown in the United States patent, and *that invention is covered by both patents.* Within the language and meaning of § 4887 of the Revised Statutes the United States patent was "*granted for an invention which has been previously patented*" in Germany and "shall be so limited as to expire at the same time with the foreign patent." The claim of the German patent reads as follows (p. 153);—

> "The replacing of the two armed lever (*s*) protected by claim 2b of the chief patent No. 45048, and of the recording stylus (29) protected by claim 4b of the same, by a spring (*aa'*) carrying the stylus for the reproduction of the sound, which with the one end is made fast to the casing (*cc'*) enclosing the diaphragm, while the other end of the same can vibrate freely, so that the vibrations communicated to the latter are carried over by means of the pin (*m*) connecting the spring and the diaphragm at right angles to the surface of the diaphragm."

The two-armed lever (*s*) protected by claim 2b of the chief patent No. 45048, and the recording stylus 29 protected by claim 4b of the same are shown in figures 2 and 9 of German patent No. 45048 and are identical with the two-armed lever (*s*) of Berliner's U. S. Patent No. 372,786, shown in figure 2 thereof, and with the recording stylus 29, shown in Figs. 1 and 2 of Berliner's U. S. patent No. 564,586, which figures 1 and 2 of U. S. patent No. 564,586 are identical with figures 8 and 9 of German patent No. 45048. The drawings of German patent No. 45048 and of French patent 186,827 are identical with the drawings of English

patent 15,232 of 1887, and by stipulation (T. case, p. 554; L. & C. case, p. 540) have not been reproduced. It thus clearly appears that in Germany, as in the United States, the improvements which Berliner describes in the construction of the details of his recorder and reproducer of the gramophone were improvements upon the gramophone set forth in his early German patents as well as in his early United States patents. It should be understood that in Germany and in France Berliner took out three patents in each country; and that in England Berliner took out two patents; that the first German, French and English patents covered the subject matter of United States patents Nos. 372,786 and 564,586; that the second German, French and English patents covered the subject matter of United States patent No. 382,790; and that the *third* German and French patents covered subject matter of the patent in suit No. 534,543.

[As will hereinafter be shown, under Point Four, if the patent in suit, as the Circuit Court of Appeals held, contains broad claims (5 and 35) for the invention described and claimed in No. 564,586, the patent in suit covers the second invention of the first German, French and English patents, and expired therewith.]

Judge Townsend found (T. case, p. 336; L. & C. case, p. 320);—

> "The drawings of the German patent are substantially identical with Figures 6 and 7 of the patent in suit and the specifications describe and the claims cover these constructions."

(c). *Futile effort of complainants' counsel in the Circuit Court to find some slight difference between the description and drawings of German patent No. 53,622 and French patent No. 207,090 and the description and drawings of the patent in suit.*

Complainants' counsel in the Court below, realizing the strength of the defences set forth under this and the following point of this brief, laboriously endeavored to find some slight distinction between the description and drawings of Berliner's third German and French patents (see Point Three for French patent) and the description and drawings of the patent in suit. Complainants' counsel admitted that the imaginary differences in operation claimed by him are nowhere stated to exist in the patent in suit. It is unnecessary to deal with these hair-breadth distinctions which complainants' counsel endeavored to draw. Concededly and obviously the numerous claims of the patent in suit would be infringed by the reproducers and recorder described and patented in the prior German and French patents. Hence the patent in suit was granted for an invention previously patented in the German and French patents, according to all the authorities, and whether there are differences or not is immaterial, as Judge Severens expressly stated in *Western Electric Co.* v. *Citizens' Tel. Co.*, 106 Fed. 215,219, where he "conceded that there are differences in some details between the foreign and the home patents upon which independent claims might be based." But he added;—

> "If the home patent CANNOT EXPIRE IN PARCELS, and the Italian patent, for instance, covered the matter of the first claim of the patent in suit, it necessarily follows that the home patent expired with the Italian patent three years after the issue of the latter, and from this it necessarily results that the complainant must fail, and that the bill should be dismissed."

In the German and French patents as well as in the United States patent there is a positive con-

nection between the spring and the diaphragm. Claim 28 of the patent in suit shows that "an adjustable *connection between the diaphragm and stylus carrier* and *adjustable* for varying the *pressure* between diaphragm and style carrier" were particularly pointed out as elements of the reproducing diaphragm and stylus. Claim 33 also covers the connection between spring and diaphragm. The same, of course, is true of the recorder of the patent in suit. Various parts of the specification might be referred to, but it seems unnecessary. As above shown constant *tension* exists between the spring and diaphragm in the United States and German patents, and means are shown in each patent for regulating the tension. The same is true of the French patent. Whatever vibrations the diaphragm does have, in reproducing the record, are due to the positive pressure of the stylus in one direction and the removal or reduction of the pressure of the stylus in the other direction, in which latter case the tension of the diaphragm comes into play to straighten the diaphragm and thus produce a vibration, as it were, toward the stylus. This clearly is the mode of operation in all the patents, notwithstanding any possible differences in the use or placing of a particular nut or screw.

Complainants' counsel did not intimate, even in the vaguest manner, and could not truthfully say that the imaginary differences, which he claimed to exist and upon which he argued, affect in the slightest degree the proposition that the numerous claims of the patent in suit, referred to under Points Two and Three of this brief, would be infringed by the structures described and patented in the prior German and French patents.

Of course, the acoustic springs of the French and

German patents, as well as of the patent in suit, have a tendency to press toward the diaphragm. The figures of the patents all show this. The French patent claims it (claim 7, p. 129). The description of the French patent expressly states that the extremity of the acoustic spring presses against the casing of the sound-box (p. 127, fol. 381) and claim 34 of the patent in suit would be infringed by this. The perforated diaphragm 111 in the tube 90 of the patent in suit (Fig. 7) is the perforated diaphragm D of Fig. 3 of the French patent. Hence claim 30 of the patent in suit would be infringed by the reproducer of the French patent, but it is useless to pursue this question further. That numerous claims of the patent in suit would be infringed by the reproducers and recorder of the German and French patents is pointed out fully elsewhere in this and the following point.

> *(f). The provision of §4887 of the Revised Statutes, fixing the single term of a home "patent granted for an invention" previously patented in a foreign country, is clear and unambiguous and must control the decision in these suits without change by judicial action "based upon same supposed policy of Congress." The Circuit Court erred in refusing to follow the unambiguous provision of the Statute, and in holding, contrary to the Statute and the decision of the Supreme Court, that a patent can have a plurality of terms and can expire in parcels.*

The point now under consideration is that the invention described and covered by prior German patent No. 53,622 is an invention covered by the patent in suit No. 534,543 and for which the patent in suit was granted. What then is the law applicable to this state of facts?

At the time the patent in suit was issued, February 19, 1895, section 4887 of the Revised Statutes was in force and read as follows:

> "Sec. 4887. No person shall be debarred from receiving a patent for his invention or discovery, nor shall any patent be declared invalid, by reason of its having been first patented or caused to be patented in a foreign country, unless the same has been introduced into public use in the United States for more than two years prior to the application. But *every patent* granted for *an* invention which has been previously patented in a foreign country *shall be so limited* as to expire at the same time with the foreign patent, or, if there be more than one, at the same time with the one having the shortest term, and in no case shall it be in force more than seventeen years."

The German patent was previously patented (*Bate Refrig. Co.* v. *Sulzburger*, 157 U. S. 1).

The following provision of the Statute fixes the *term* of the United States patent:

> "But *every patent* granted for *an* invention which has been previously patented in a foreign country *shall be so limited* as to expire at the same time with the foreign patent."

The *test* is whether the United States *patent* has been granted for "*an*" invention which has been previously patented in a foreign country. Clearly there is no ambiguity in these words of the Statute. It is the *patent*, and not the separate claims thereof, which shall be so limited to expire. If there is *an* invention described and claimed in the United States patent, then it is clear that the United States *patent* was granted for *that* invention; and, if *that* invention was previously patented in a foreign country the *term* of the United States *patent*

> "must be so limited as to expire at the same time with the foreign patent, or, if there be

more than one, at the same time with the one having the shortest *term*."

The *definition* and *designation*, contained in the statute, of the *invention* which must appear in the United States patent and in the prior foreign patent, in order that the former shall be limited to expire with the latter, is an invention "*which has been previously patented in a foreign country.*" This is the sole and exclusive definition and designation. The court cannot change the definition and designation. The test, therefore, is solely, whether the United States patent claims the "invention which has been previously patented in a foreign country." If so, the statute applies and the United States *patent* expires with the foreign patent.

This provision of the Statute fixes the *term* of the United States *patent* as a whole. To fix the *term* of the *patent* is the sole purpose of the provision (*Sawyer Spindle Co.* v. *Carpenter*, 143 Fed. 976,979. It does not assign to the several claims of the patent different terms. It assigns to the patent as a whole a *single term* and the *patent* or *the* term of the patent must be so limited as to expire at the same time with the foreign patent. The Statute applies *whenever* a United States patent is granted for an invention which has been previously patented in a foreign country. When the Statute once applies, the *term* of the United States patent is limited by the *term* of the prior foreign patent and must expire therewith. No exception is made in favor of a United States patent which may contain additional claims which would not be supported by the specification of the foreign patent. No matter what else the United States patent may contain, if it *does* contain, and if it *is* granted for, *an* invention previously patented in a foreign country, the *term* of the United States patent *as a whole* must expire with the *term*, and the *shortest term*, of the prior

foreign patents. The single term of the prior foreign patent measures the single term of the home patent. This clearly is what the Supreme Court held in *Siemens' Adm'r. v. Sellers*, 123 U. S. 276, when it said that a patent "*cannot be construed as running partly from one date and partly from another. This would be productive of endless confusion*"; and this clearly is the plain provision of the Statute. Under such circumstances, the question whether one claim of a patent embodies a basic invention or is more important than another claim of the same patent need not be determined since the answer to such a question, if, *indeed, it can be answered*, is *not the test prescribed by the Statute*. Such a test would involve the greatest doubt, *confusion* and uncertainty. There is no provision in the statute limiting the *extent* of the expiration of a patent granted for an invention previously patented in a foreign country. There is no provision in the Statute giving to a patent "*granted for an invention which has been previously patented in a foreign country*" one term for claims covering *that* invention and another term for other claims which may be contained in the patent. *According to the Statute*, the United States *patent* is to have a *single* term if it is granted for *an* invention previously patented in a foreign country, no matter what else the United States patent may be granted for. The rule of the Statute is clear and positive. No exception is stated. The rule applies to "*every* patent." When therefore, the Circuit Court in the suits at bar held that claims 5 and 35 of the patent in suit could survive the expiration of prior foreign patents granted, concededly, for *an* invention for which the United States patent in suit was granted, the Circuit Court clearly erred on the question of law, and further erred in holding that claims 5 and 35 cov-

ered Berliner's *basic* invention. As above shown, under Point One, claims 5 and 35, like all the other claims of the patent, are claims for *improvements*, stand in the same category with all the other claims as being for improvements upon the basic invention set forth in patent No. 372,786, must, in fact be limited by the details of improvement in the reproducer if they ever had any validity, and are subject to the same rule of law as to expiration with prior foreign patents. But even if claims 5 and 35 do cover Berliner's basic invention, the numerous other claims of the patent in suit, as above and hereinafter shown, cover *an* invention previously patented in foreign countries; therefore, the *term* of the *patent* in suit was limited by §4887 of the Revised Statutes to expire with the expiration of the shortest term of the terms of the prior foreign patents, and when the *term* of the patent in suit *expired* claims 5 and 35 could not survive, no matter how important or how basic may have been the subject matter thereof. Suppose several prior foreign patents granted in the same country for different features of the invention covered by the home patent. In such case, the home patent must expire "*with the one having the shortest term.*" The Patent Office so held even before the decision in *Siemens' Adm'r v. Sellers* (*ex parte Unsworth*, 15 O. G. 882).

In *Bate Refrig. Co.* v. *Sulzberger*, 157 U. S., 1, 36, the Supreme Court, referring to the language of §4887 of the Revised Statutes, said, as summarized in 4 Fed. Rep. Digest 9048;—

> "Where the language of a statute is *plain* and *unambiguous*, it is the *duty* of the court to enforce it according to the *obvious meaning* of the words, *without attempting to change it* by adopting a different construction, based upon some *supposed policy* of congress in regard to the subject of legislation, or upon considerations of *injustice* or *inconvenience* arising from the enforcement of the statute according to its terms."

There can, however, be no injustice in enforcing the Statute in cases such as the suits at bar. Assuming, contrary to the fact, that claims 5 and 35 are separable from the other claims of the patent in suit, then Berliner *voluntarily* included them in the patent with other claims for inventions which to his knowledge he had previously patented in foreign countries. He, therefore, *voluntarily* subjected the claims in suit to the operation of the Statute and no strained or forced interpretation or construction of the Statute should be resorted to in order to protect him against his voluntary act.

In support of its holding that where the language of a statute is plain and unambiguous, "a refusal to recognize its natural, obvious meaning would be justly regarded as indicating a purpose to change the law by judicial action based upon some supposed policy of Congress", the Supreme Court in *Bate Refrig. Co.* v. *Sulzberger*, cited and quoted at p. 37 (157 U. S.), its prior decisions in the two following cases;—

Hadden v. *Collector*, 5 Wall, 107, 111, where the court said;—

> "What is termed the policy of the government with reference to any particular legislation is generally *a very uncertain thing*, upon which all sorts of opinions, each variant from the other, may be formed by different persons. It is a ground much too unstable upon which to rest the judgment of the court in the interpretation of statutes."

Scott v. *Reid*, 10 Pet., 524, 527, where the court said;—

> "Where the language of the act is explicit, there is great danger in *departing from the words used*, to give an effect to the law which may be *supposed* to have been designed by the legislature. *It is not for the court* to say, where the language of the statute is clear, that it shall be so construed as to embrace cases because no good reason can be assigned why they were excluded from its provisions."

By what authority, then, did Judge Townsend read into the statute the exception that it "does not apply to cases where the foreign patents which have expired do not cover the *broad* claims for the *basic* invention?" There is contained in the statute no such exception to the clear and imperative rule that the United States patent shall expire with a prior foreign patent if the invention protected by the prior foreign patent is "*an* invention" for which the United States patent was granted.

The proper rule for the interpretation of a statute, such as the Canadian Patent Act, hereinafter referred to under Point Nine, was stated, in perfect agreement with the rule stated by the Supreme Court in *Bate Refrig. Co.* v. *Sulzberger*, *supra*, by the House of Lords in England in *Dominion Cotton Mills Co.* v. *General Engineering Co.*, L. R. App. Cas. (1902), p. 570. In that case it was said (p. 573);—

> "The whole question, therefore, turns on the meaning and legal effect of the words 'under any circumstances, *if a foreign patent exists*, the Canadian patent shall expire at the earliest date on which any foreign patent for the same invention expires.'"

The Canadian Exchequer Court held, in the first instance, that the words "if a foreign patent exists" referred to the date of the *grant* of the Canadian patent. The Canadian Supreme Court reversed the Exchequer Court and held that the words referred to the date of the *application* for the patent. Thus both the Exchequer Court and the Supreme Court attempted, by judicial legislation, to read into the statute something which was not there. The House of Lords held that the words meant *just what they said* and that according to the statute a Canadian patent must expire with a foreign patent existing *at any time* during the continuance of the Canadian patent. The House of Lords said (p. 573);—

"The language is *clear* and *imperative*. Their Lordships can only understand it as declaring that under all circumstances as soon as any foreign patent for the same invention expires the Canadian patent, if then existing, shall expire also; they can *find* no limit as to time except that the foreign patent must both exist and expire after the Canadian patent has been granted and before it has ceased from any other cause."

(g). *The principle of the decisions of the Supreme Court in Siemens' Adm'r. v. Sellers, 123 U. S. 276, and of the lower Courts following that decision, is that "a patent cannot expire in parcels," "cannot be construed as running partly from one date and partly from another. This would be productive of endless confusion." Such principle is derived from, and is the only principle which can be derived from, the provision of §4887 of the Revised Statutes fixing the term of the patent.*

In the leading case of *Siemens' Adm'r. v. Sellers*, 123 U. S. 276, the question was whether a United States patent which had four claims had expired with a prior English patent which had only one claim. It was argued on behalf of the appellants as follows (123 U. S. 280):—

"II. But if it be admitted that this claim is anticipated by the English patent of 1861, this would not invalidate the first three claims of the patent."

In answer to this argument the Supreme Court said;—

"It is contended by the counsel of the complainants, that the American patent contains improvements which are not exhibited in the English patent. But if this were so, it would not help the complainants. The principal invention is in both; and if the American patent contains improvements, this fact cannot save the patent from the operation of the law which is invoked, *if it is subject to that law at all.*

> A patent cannot be exempted from the operation of the law by adding some new improvements to the invention; *and cannot be construed as running partly from one date and partly from another. This would be productive of endless confusion.*"

The Supreme Court held that the United States patent was limited by the prior English patent. The *principle* of the decision in *Siemens' Adm'r.* v. *Sellers, set forth in the words above italicized,* has been followed without exception in all reported cases, except the suits at bar. The decision was made in 1887. As the claims of the home patent, for features not contained in the foreign patent, were held to have expired with the foreign patent, the law became settled, that *the home patent could not be kept alive as to such features by disclaiming the features of the expired foreign patent.*

The decision in *Siemens' Adm'r.* v. *Sellers* establishes that a patent *cannot* be construed as running partly from one date and partly from another, the *reason* being that *this would be productive of endless confusion.* Hence, the *principle* may be broadly stated, that where a United States patent covers an invention which has been previously patented abroad, the term of the United States patent will expire with the term of the foreign patent, although the United States patent may cover improvements or other matter not described or covered by the prior foreign patent. Clearly, therefore, the patent in suit expired on November 7, 1902, with German patent No. 53,622, before the suit against the Talk-O-Phone Company or the suit against the Leeds & Catlin Company was begun. The suit against the Leeds & Catlin Company was brought in July, 1904, and the suit against the Talk-O-Phone Company was brought in September, 1904, (Aff. Hicks, p. 76, fol. 228).

As above shown under Point One, Subdivision (*c*) (p. 21), the expression "principal inven-

tion" was used in antithesis to "improvements" upon that invention, merely to refer to and to point out *an* invention, which was found in both the home patent and the prior foreign patent; but the relative importance of the principal, first or primary invention and of the invention consisting of improvements upon it was not considered or stated by the Supreme Court and *in no sense entered into the decision of the case*, which proceeded *solely* upon the *principle* embodied in the *Statute* that the *term* of the home patent must expire with the term of the prior foreign patent, that the home patent cannot have a plurality of terms and *cannot be construed as running partly from one date and partly from another.*" The decision would have been the same, under the *principle* stated as the *ground of the decision*, had the invention found in both the home and prior foreign patents been the improvements upon the principal invention; for whether the prior foreign patent contains only the improvements or only the principal invention found in the home patent the Statute must apply, since, in either case, the home patent is "granted for *an* invention which has been previously patented in a foreign country" and "*every*" such "*patent*" must expire, that is its *term* must expire, with the expiration of the term of the prior foreign patent. This is why the lower Courts, including the Circuit Court of Appeals for the Second Circuit in *Electrical Accumulator Co. v. Brush Electric Co.*, 52 Fed. 130, 139, cited, *infra*, p. 63, following the *principle* of the decision of *Siemens' Adm'r. v. Sellers*, have without exception and repeatedly, as will hereinafter appear, directed their inquiry to ascertain whether *any one* invention claimed in the home patent is contained in the prior foreign patent, and have repeatedly stated that "*a patent cannot expire in parcels*," "*cannot expire in part and survive in part.*"

(*h*). *Broadening or narrowing of the claims of an American patent will not prevent the operation of the Statute.*

In *Federal Statutes Annotated*, Vol. 5, p. 470 (published by Edward Thompson Co., 1905), the law settled by the decision of *Siemens' Adm'r* v. *Sellers* and other cases following that decision, is stated as follows;—

> "*The addition of new improvements* not contained in the foreign patent, or the *broadening or narrowing* of the claims of an American patent, will not prevent the operation of the statute, as *a patent cannot be construed as running partly from one date and partly from another. Siemens' Adm'r* v. *Sellers* (1887) 123 U. S., 276; *Clark* v. *Wilson* (1886) 28 Fed. 95; *Holmes Electric Protective Co.* v. *Metropolitan Burglar Alarm Co.* (1887) 33 Fed. Rep. 254; *Accumulator Co.* v. *Julien Electric Co.* (1893) 57 Fed. Rep. 605; *Brush Electric Co.* v. *Electrical Accumulator Co.* (1891) 47 Fed. Rep. 48."

Hence, the question is whether an invention covered by the prior foreign patent is also covered by the United States patent. If so, the United States patent was granted for that invention and expires with the prior foreign patent under section 4887 of the Revised Statutes. Broadening and narrowing of claims is immaterial. If an invention is described and protected by the prior foreign patent and is also described and protected by the United States patent, the United States patent must expire with the foreign patent irrespective of all other considerations. The decided cases leave no doubt upon this proposition.

(*i*). *The test of the question, whether an American "patent is granted for an invention" previously patented in a foreign country, is whether an article made according to the de-*

scription of the invention of the foreign patent would infringe the American patent, that is any claim of the American patent.

The case of *Commercial Manufacturing Co.* v. *Fairbank Co.*, 135 U. S. 176, is a leading case setting forth the test for identity of invention. In that case a prior Austrian and a prior Bavarian patent had expired. The original term granted for the Austrian patent was one year and the patent was "*prolonged*" from year to year, and then permitted to expire. The original term was granted October 31, 1869, and the patent expired May 26, 1876 (see record on appeal, pp. 484-486). The Bavarian patent was granted April 8, 1873, "for the space of two years." It was then "*prolonged* (renewed) from April 8, 1875, for another year" and "became void on the 8th of April, 1876, on account of expiration of the granted term" (record on appeal, p. 487.) Upon the argument in the Supreme Court, as appears from page 3 of appellant's brief by Mr. Offield, the "asserted error" was that the court below dismissed appellant's bill upon this ground alone, namely, "that the complainant's patent expired April, 1876, by the expiration of the Bavarian and Austrian patents."

The Supreme Court affirmed the decree of the court below, dismissing the bill for the reasons stated, and upon the question of identity of invention the Supreme Court said;—

> "In regard to the foreign patents the opinion of the Circuit Court says; . . . p. 194, 'A fair test of the question as to whether the American patent is anticipated by the foreign patents, or *is included in them*, we think would be: were a person in this country, after the issue of the present American patent, to commence the manufacture of oleomargarine by the precise process described in the Bavarian or Austrian patents, supposing that process had not been patented abroad, would the courts

refuse an injunction to restrain the use of the process on the ground that it infringed that covered by the American patent? We can hardly deem it possible that any intelligent court would deny an injunction if applied for under such circumstances, and we think this fairly illustrates the relation of the foreign to the American patent.'

"The conclusion of the Circuit Court was that the plaintiffs' *patent expired* by the *expiration* of the Bavarian and Austrian patents.

"We have carefully considered the arguments urged in the briefs of the counsel for the plaintiffs, in connection with the testimony of their experts, and are of opinion that *the views of the Circuit Court, above quoted, are correct.*"

(*j*). *In determining whether a home patent is granted for an invention previously patented in a foreign country, the precise question is whether* ANY *of the claims of the home patent include the invention or some substantive part of the invention shown by the prior foreign patent. If so, the home patent expires as to all its claims with the foreign patent since a* "PATENT CANNOT EXPIRE IN PARCELS."

In *Western Electric Co.* vs. *Citizens Tel. Co.*, 106 Fed. 215, Judge Severens applied the principles of *Siemens' Adm'r* v. *Sellers* and *Commercial Mfg. Co.* v. *Fairbanks Co. supra*, in accordance with the uniform action of the lower courts following the decisions and opinions of the Supreme Court in those two leading cases. The question before Judge Severens was, whether a United States patent had expired with the expiration of several prior foreign patents to the same inventor. A prior Italian patent had been granted to the same patentee for a term of three years and had expired at the end of the three years. Prior English and French patents had also been granted to the same patentee and

had also expired. Differences existed between the United States patent and the prior foreign patents, and the question was whether the United States patent was granted for an invention, *any invention*, covered by the prior foreign patents, and whether the United States patent expired with the prior foreign patents. Judge Severens in deciding that case held that the United States patent was granted for "*an*" invention covered by the prior foreign patents, and, therefore, expired with the Italian patent. As stated in the head note, the *point* of the decision was, whether *any* of the claims of the home patent included any substantive part of the *invention* of *the foreign patent*. In the course of his opinion, Judge Severens said (p. 217);—

> "The question then is whether the Eldred invention covered by his home patent was patented by the one taken out in Italy, *or*, putting it another way, and with rather *more precision*, do its claims, *or any of them*, include the invention, or *some* substantive *part* of the invention, on which an independent claim might be founded, shown by the Italian patent. There being no formal claims in the latter patent, it is *prima facie* to be presumed that the law of Italy does not require it. And the further inference arises that whatever is new either in a single element, or in a combination of several elements, such as might stand for a claim under our own statute, would be covered by the patent. . . . *A careful study of the Eldred Italian patent leaves no doubt that it does embody the very matter of many of the claims of his home patent; that is to say, very many of the claims of the latter could be well founded on the specification of the former.*
>
> . . . (p. 219) "To the British patent are appended nine claims, eight, at least, of which are founded on the *details* of the single exchange office, and are for combinations and congeries thereof. Identical claims are appended to the French patent. With respect to most of those claims, if one were allowed to substitute equivalents, they could be made upon the specifications of the home patent. But, what is more directly to the point, the es-

sence of the patent in suit contained in the first *claim* thereof, namely, the cutting out of the annunciator from the circuit employed for conversation, is embodied in the description of the invention in the foreign patents. The construction given in the specification necessarily involves it. The case is, therefore, brought under the operation of the rule, laid down in *Siemens' Adm'r.* v. *Sellers*, 123 U. S. 276, even though it be conceded that there are differences in some details between the foreign and the home patents upon which independent claims might be based. *If the home patent cannot expire in parcels, and the Italian patent, for instance, covered the matter of the first claim of the patent in suit, it necessarily follows that the home patent expired with the Italian patent three years after the issue of the latter, and from this it necessarily results that the complainant must fail, and that the bill should be dismissed."*

The basis of this decision, as appears from the words in italics, is that the *"home patent cannot expire in parcels,"* following the *rule* of the Supreme Court that a patent *"cannot be construed as running partly from one date and partly from another. This would be productive of endless confusion."* Such rule is in conformity with the clear, unambiguous provision of the Statute. The Circuit Court, in the suits at bar, in order to hold claims 5 and 35 to be still in force, was obliged to ignore, as it did ignore, the principle of the Statute and of the two decisions cited and to rely upon a ground inconsistent with the statute and the *principle* of the decisions cited.

(*k*). *The Circuit Court and the Circuit Court of Appeals for the Second Circuit have determined the question, whether a home patent was "granted for an invention" previously patented in a foreign country, by ascertaining whether* "ANY ONE *of the in-*

> *ventions" claimed in the home patent is contained in the prior foreign patent, and whether any claim of the home patent would be infringed by the structure of the foreign patent; and have held in effect, that in such case, the home patent could not expire in parcels.*

In *Electrical Accumulator Co.* v. *Brush Electric Co.*, 52 Fed., 130, the Circuit Court of Appeals for the Second Circuit, following *Siemens' Adm'r* v. *Sellers* and *Commercial Mfg Co.* v. *Fairbank Co.*, *supra*, held that a home patent did not expire with a prior Italian patent, giving as the reason therefor, that *no one* of the inventions of the home patent was covered by the prior Italian patent. The Court said (p. 139);—

> "In our opinion, the Italian patent is not the same in *its* essential particulars with *any one* of the inventions which are claimed in 337,299, and the home 'patent would not be infringed by a structure made in accordance with the provisions of the foreign patent.'"

Clearly the court had in mind the *rule* that a patent cannot expire in parcels, cannot be construed as running partly from one date and partly from another, and the *further rule* that a United States patent is granted for an invention previously patented in a foreign country if the home patent, that is any *claim* of the home patent, would be infringed by a structure made in accordance with the provisions of the foreign patent. If it would be so infringed, then the "essential particulars" of the prior foreign patent are the same as *some* invention, "*any one*" of the inventions, *claimed* in the home patent and the term of the home patent must expire with the expiration of the term of the prior foreign patent.

In the court below (47 Fed., 48, 52), in the same

case, Judge Coxe was clearly of the same opinion. In the course of his opinion, he said (p. 52);—

> "Whether the expiration of a foreign patent for an improvement only will operate to overthrow a domestic patent for a broad invention, which contains also a claim covering the improvement, has not, *apparently*, been decided by the Supreme Court. *The language of the Court in Siemens' Adm'r v. Sellers, supra*, is, *perhaps, comprehensive enough to cover such a contingency, but this is a question which need not now be considered.*"

Judge Coxe's meaning is clear. Although the facts in *Siemens' Adm'r v. Sellers* were slightly different from the facts in the case supposed, nevertheless the *principle* of the decision in the *Siemens'* case, contained in the comprehensive language referred to, would cover the situation in the case supposed. It is significant that, in the same case on appeal, the Circuit Court of Appeals agreed, as above shown, with Judge Coxe's statement as to the comprehensive character of the *principle* enunciated in the *Siemens'* case and, therefore, applied the *rule* and *test*, which appellants in the suits at bar contend is the *only* rule and test prescribed by the statute. The principle, by which this case is to be decided, must be derived from the *statute solely* and the statute affords no basis for any distinction in principle between the facts in the *Siemens'* case and the facts in the case put by Judge Coxe. Judge Townsend, in the suits at bar, was unable to state or to point out any such distinction in principle and no such distinction exists or has ever been stated to exist in any reported case, while, on the other hand, every expression bearing directly upon the question used by the courts confirm the appellants

in their contention that the rule and test applied by the Circuit Court of Appeals in the *Electrical Accumulator Co.* case, above cited, is the only rule and test derivable from the statute.

No further consideration of authority is necessary to show that if the subject matter of one or more claims of a United States patent is covered or protected by a prior foreign patent to the same inventor, the United States patent is "granted for an invention" previously patented in a foreign country and its *term* expires, and, therefore, all its claims expire, with the expiration of the term of the prior foreign patent. *The patent cannot expire in parcels; it can have but a single term.* And the test as to whether the subject matter of a claim of the United States patent is covered or protected by the prior foreign patent, or is included in it, is, as laid down by the Supreme Court in *Commercial Mfg. Co* v. *Fairbank Co., supra*, whether an article made according to the description of the prior foreign patent would infringe the American patent. If the article would infringe the American patent, that is, any *claim* of the American patent, then the same invention is covered by the American and the prior foreign patent, and the term of the American patent and all the claims thereof expire with the prior foreign patent. These propositions of law are so clear under the statute and the authorities cited and their application to the suits at bar is so obvious that it is unnecessary further to show that the reproducer of Berliner's prior German patent No. 53,622, would, without question, infringe claims 24, 25, 26, 28, 31, 32, 33 and 34, and possibly other claims.

(*l*). *The improvements claimed in claims 24-34 are included among the elements of the improvements claimed in claims 5 and 35 of*

the patent in suit. Claims 5 and 35, being claims for improvements merely, as above shown under Point One, must expire, under any construction of the Statute, with the expiration of other claims for improvements; and being claims for improvements which include the improvements claimed in the claims which concededly have expired, claims 5 and 35 must, a fortiori, have expired with the expiration of the other claims for improvements.

Althought not necessary to the point hereunder discussed, because if claims 24-34 or anyone or more of them cover the invention of the prior German patent No. 53,622, the term of the patent in suit, and all its claims, including claims 5 and 35, expired with the expiration of the term of the German patent, it may be here remarked that the reproducer covered *specifically* by the claims mentioned 24-34 of the patent in suit and by the prior German patent is an *element* of claims 5 and 35. The stylus is provided with a wedge-shaped point, shaped for engagement with the record, and is permitted to *vibrate substantially as described* in claim 5; and the reproducing stylus, shaped as above described, is free to be *vibrated substantially as described* in claim 35. The reproducer is constructed so as to permit the stylus to engage with the record-groove and to vibrate laterally, and it is the lateral vibration of such a stylus which is referred to and covered in claims 5 and 35 as well as in claims 24-34. *Hence, the invention covered by claims 24-34 permeate claims 5 and 35.* Referring to Judge Hazel's opinion, forming part of the moving papers upon the motions for preliminary injunction, it will be seen that Judge Hazel held that the *lateral vibration* of the stylus and the *construction* and *mounting* of the stylus so as to permit engagement with the record and the lateral vibrations

thereof form a primary, distinguishing and essential feature of Berliner's invention of the patent in suit as claimed in claims 5 and 35 thereof. Judge Hazel, having claims 5 and 35 alone under consideration, said (p. 67);—

> "Complainants contend, and the proofs show, that the stylus attached to the diaphragm is arranged so as to permit the same to *vibrate laterally*, and that owing to lateral undulations in the walls of the record groove, a desirable swaying motion is imparted to the reproducer diaphragm. * * * In the Suess patent is contained a description corresponding to the features of claim 35, in suit. The primary object of Suess, an employee of Berliner, however, was merely *to construct a suitable pivotal support for the diaphragm and stylus, so as to assist such device in its passage across the record.* It is expressly stated in the specification of the Suess patent that the invention relates to improvements in the reproducing apparatus of Berliner, and that the *construction and mounting of the stylus* form no part of the invention. *The improvement of Suess, therefore, is not an anticipation.*"

Thus it was established in the prior suit that the *construction and mounting* of the stylus of the reproducer, so as to permit its engagement with the record and its lateral vibration, was an essential element of claims 5 and 35. But it did not appear in the prior suit, as it does now in the suits at bar, that the construction and mounting of the stylus for such purpose, in the manner shown in the patent, was a mere *improvement* in the details of construction of the reproducer of the gramophone of Berliner's earlier United States and foreign patents.

Reference to the moving affidavits upon the motions also shows that the lateral vibration of the reproducing stylus, shaped for engagement with the record, is regarded by complainants' ex-

perts as an essential feature of claims 5 and 35. Mr. Middleton, for example, in describing the operation of complainants' machine, says (aff. p. 51, fol. 153) that;—

> "The stylus of the sound-box *engages the record groove* of complainants' sound record and when the latter is rotated with the turntable, the stylus is *laterally vibrated* to set up vibrations in the sound-box diaphragm."

Mr. Kennedy, in describing the invention of the patent in suit says, (aff. p. 57, fol. 169);—

> "The sound-box contains a diaphragm which is set in vibration by a stylus suitably connected therewith, which stylus *enters the record* groove and is *laterally vibrated* thereby. These lateral vibrations being reproduced in the diaphragm," etc.

Although the proposition that a reproducer, having a stylus with a wedge-shaped point, shaped for engagement with the record, and so constructed as to permit the lateral vibration of the stylus, is an element of, and permeates, claims 5 and 35, is not essential to the point here under discussion, that the reproducer of the prior German patent No. 53,622 having been patented by the patent in suit, the *term* of the patent in suit and, therefore, all the claims thereof expired with the expiration of the term of the prior German patent; nevertheless, in *Sawyer, Spindle Co.* v. *Carpenter*, 133 Fed., 238, aff'd 143 Fed. 976, Judge Brown held, that where a *specie claim* of a home patent expired with the expiration of a prior foreign patent, a *generic claim* of the home patent, covering the specific form of the specie claim and *other forms as well*, also expires, *because* although the American generic claim may be *broader*, "it is still true that what is claimed under the generic

claim has already been patented in a foreign country."

> *(m). Judge Brown has held, in Sawyer Spindle Co. v. Carpenter, 133 Fed., 238; aff'd, 143 Fed., 976, (1), that a patent cannot expire in part and survive in part; and (2) that a generic claim, covering the specific form of a specie claim and other forms as well, must, under any construction of the statute, expire with the expiration of the specie claim. Hence, if claims 5 and 35 in suit are generic or broad claims, they must have expired, with the specie claims under the second part of Judge Brown's decision, as well as under the first part.*

In *Sawyer, Spindle Co.* v. *Carpenter*, 133 Fed., 238, aff'd, 143 Fed., 976, Judge Brown criticised Judge Thomas' decision in Aquarama Co. v. Old Mill Co., 124 Fed., 229, and said;—

> Brown, D. J; p. 240. "The defendant contends also that the invention of claim 5 of the patent in suit was not patented by the British patent. It is conceded that the first four claims of the patent in suit and of the British patent are substantially identical, and that the inventions covered thereby are the same. The defendant argues that, though the patent in suit may have expired as to four of its claims, it may still exist as a valid patent for the invention of the fifth claim: citing *Aquarama Co.* v. *Old Mill Co.* (C. C.) 124 Fed. 229. I do not find, however, in the opinion in that case, any reference to *Siemens' v. Sellers*, 123 U. S. 276, where a similar contention was made (page 280, 123 U. S.). The court said (page 283, 123 U. S.):
>
> "'A patent cannot be exempted from the operation of the law by adding some new improvements to the invention, and *cannot be construed as running partly from one date and*

partly from another. This would be productive of endless confusion.'

"But assuming *for the sake of the argument only*, that a patent may be limited *in term* by a foreign patent as to some of its claims, and not as to others—that it may expire in part and survive in part—it would still seem impossible that a single claim should in part expire and in part survive. Where the difference between two claims is merely in breadth, the first being a specific claim for a particular embodiment of an invention, and the second being a generic claim which covers the specific form of the first claim, and other forms as well, it follows, upon the expiration of the specie claim, that the specific invention claimed therein can no longer be held to infringe the patent, and that the generic claim has expired in part at least. Two patents and two claims may be regarded as for the same invention, though one claims only a special machine, and the other claims broadly a genus which includes the former. *Otis Elevator Co.* v. *The Portland Co.*, 127 Fed. 557 (C. C. A.); *Miller* v. *Eagle Mfg. Co.* 151 U. S., 186; *Robinson on Patents* § 464 465, vol. 2, p. 45. When this is the case, *though the American claim may be broader than that of the prior British patent, it is still true that what is claimed under the generic claim has already been patented in a foreign country.* I can see no reason why the rules which are applied to determine the question of double patenting when United States patents are involved are not also applicable when the question is whether the invention has been first patented in a foreign country."

Judge Brown was clearly of the opinion that *a patent cannot expire in parcels, cannot expire in part and survive in part;* but, under the assumption made by him *"for the sake of the argument only"*, if claims 5 and 35 are generic claims, they must be held to have expired with the specie claims 24-34, covering the construction of the stylus with a wedge-shaped point, so as to permit

engagement with the record, and covering the construction and mounting of the stylus, so as to permit the lateral vibrations, substantially as described, since those elements are all embodied in, and permeate, claims 5 and 35.

> (*n*). *In order that the statute shall apply and limit the term of the home patent, the home patent must be granted for an invention for which the prior foreign patent was granted. Aquarama Co. v. Old Mill Co., 12½ Fed., 229; Westinghouse Co. v. Stanley Co., 138 Fed., 123.*

Judge Brown was correct in stating that in Judge Thomas' opinion in *Aquarama Co.* v. *Old Mill Co., supra*, there was no reference to *Siemens' Adm'r* v. *Sellers*, 123 U. S., 126. A careful reading of Judge Thomas' opinion discloses, however, that Judge Thomas did not hold anything contrary to the decision of the Supreme Court in *Siemen's Adm'r.* v. *Sellers*, that a patent "*cannot be construed as running partly from one date and partly from another. This would be productive of endless confusion.*" If Judge Thomas did so hold, his decision, of course, is not in accordance with the well settled law. Counsel for defendants in the suits at bar was connected with the suit of the *Aquarama Co.* v. *The Old Mill Co.*, in one of its aspects, but not upon this question of the expiration of the United States patent by reason of the prior English patent. In order to understand, however, what was decided by Judge Thomas upon this point in that case, counsel has examined all the papers, including the affidavits, exhibits and briefs on both sides filed on the motion to dissolve the injunction upon the ground that the United States patent had expired with the expiration of a prior English patent. The

question argued by the experts in the affidavits and by counsel in their briefs was *solely* the question as to whether or not the invention covered by the United States patent was the same as the invention covered by the prior English patent. There was really but little argument on the point on behalf of the defendants, who were not represented by counsel of the patent bar. Complainant's experts and counsel argued at great length to show that the canal of the English patent would not infringe the U. S. patent and that the inventions of the two patents were not the same and Judge Thomas, as appears from his opinion, took that view. The decision of the Supreme Court in *Siemens' Adm'r* v. *Sellers* was not cited in the brief of either counsel. No such point was made. In fact, counsel for defendants in support of the motion cited only one case, *Commercial Mfg. Co.* v. *Fairbank Co.* in the Court below, 27 Fed., 78, on the question of identity of invention and in addition cited *Edison Co.* v. *Electric Co.*, 60 Fed., 401, aff'd, 66 Fed., 509, and *Bonsack* v. *Smith*, 70 Fed., 383, to the effect that the burden was upon the complainant to show that the prior English patent had been renewed. No other cases whatever were cited on behalf of the defendants in support of their motion, and no other points whatever were raised either in their affidavits or in their brief in support of the motion. Hence, *the only question before Judge Thomas was whether or not the inventions of the United States and of the English patents were the same*, and on this point he held with the complainants that the inventions were not the same, and it followed necessarily that the United States patent not covering the invention of the English patent and being for an improvement of a patentable nature did not expire with the

English patent. There was no claim of the United States patent which would have been infringed by the structure covered by the English patent, and hence Judge Thomas merely held, that the United States patent was for a patentable improvement over the invention shown in the English patent, and was not "granted for an invention" previously patented in a foreign country and did not expire with the English patent. Judge Thomas did not hold contrary to the decision of the Supreme Court in *Siemens' Adm'r.* v. *Sellers* that the United States patent expired as to part and continued in force as to the improvements. Being a patent for improvements *only* not set forth in the English patent, it was not granted for an invention previously patented by the English patent and did not, therefore, expire with the English patent.

In *Westinghouse Co.* v. *Stanley Co.*, 138 Fed. 125, it was argued by complainants' counsel (see brief on appeal, p. 27) that;—

> "There is no case which desides that a foreign patent for an *improvement* not described or suggested in a United States patent will limit the latter's term."

The court upheld this contention which was unquestionably correct. The improvement, the court said, "was a patentable improvement" and hence the invention of the prior English patent, which was for the patentable improvement, was not the same as the invention of the United States patent which did not cover the improvement for which *alone* the English patent was granted. The United States patent, therefore, was not "granted for an invention" previously patented in the foreign country and the Statute did not apply.

On the other hand, in *Aquarama Co.* v. *Old Mill Co.*, 124 Fed. 229, Judge Thomas held that a United

States patent for an improvement *only* was not limited by a prior English patent which did not contain the improvement. At p. 232, Judge Thomas said;—

> "In the United States patent the obvious purpose was to *close* the space. Everything shows that the space was to be kept *open* in the British patent and to be *closed* in the United States patent. . . ."
>
> This difference, Judge Thomas held (p. 233) was "so valuable and apparently so indispensable to the proper operation of the canal that it must be concluded that it shows patentable invention."

The foregoing decisions in *Westinghouse Co.* v. *Stanley Co.* and in *Aquarama Co.* v. *Old Mill Co.* are in accord with the decision of the Supreme Court in *Miller* v. *Eagle Mfg. Co.*, 151 U. S. 186, where the Supreme Court laid down the broad rule that (p. 198);—

> "The result of the foregoing and other authorities is that no patent can issue for an invention actually covered by a former patent, especially to the same patentee, although the terms of the claims may differ; that the second patent, although containing a broader claim, more generical in its character than the specific claims contained in the prior patent is also void. . . .
>
> (p. 199) "It is also settled that an inventor may make a new *improvement* on his own invention of a patentable character, for which he may obtain a separate patent, and the cases cited by the appellee come to this point and to this point only, that a later patent may be granted where the invention is clearly *distinct from*, and *independent* of, one previously patented."

(*o*). *Judge Lacombe, in the Welsbach Light Co. cases, held that the broad generic claim of a home patent expired with the expiration of*

a prior foreign patent which did not cover the broad invention but covered only a species of the invention.

In *Welsbach Light Co.* v. *Rex Incandescent Light Co.*, 94 Fed. 1006, 1009, Judge Lacombe held that the patent there in suit to Rawson and Rawson, covering the coating of a mantle with paraffine or other suitable material in order to strengthen it for transportation, differed from the prior English patent to Rawson and Rawson in that the prior English patent, as interpreted by the English Court, was limited to a *hot* solution, while the United States patent included, not only a *hot*, but also a *cold* solution. Nevertheless, about a year later, upon the expiration of the prior English patent to Rawson and Rawson, when counsel for defendants in the suits at bar, Mr. Hicks, moved before Judge Lacombe to dissolve the preliminary injunctions previously issued against the use of the process of the patent upon the ground of the expiration of the United States patent with the expiration of the term of the English patent, Judge Lacombe granted the several motions, stating from the bench that there was no question but that the United States patent expired with the English patent. Although the claims of the English patent were different from the claims of the United States patent, and although the English patent was limited to the use of a *hot* solution and the United States patent broadly covered the use of all solutions, both *hot* and *cold*, it was clear that the United States patent was granted for an invention, the use of a *hot* solution, previously patented in the English patent. Hence, under the statute, the term of the United States patent expired with the expiration of the term of the English patent, and with the expiration of the term of the patent the *generic* claim, covering the use of *all* solutions.

hot and *cold*, expired. Orders dissolving the injunctions were entered on August 31, 1900, in the office of the clerk of the Circuit Court in six suits, being those of *Welsbach Light Co.* v. *United Incandescent Light Co.; same* v. *Rex. Inc. Light Co.; same* v. *Daylight Inc. Light Co.; same* v. *Union Inc. Light Co.; same* v. *New York Chemical Refining Co.;* and *same* v. *American Inc. Lamp Co.* The court will, of course, take judicial notice of these orders filed of record. No written opinion was filed.

The claim of the Rawson U. S. patent (see case on appeal, p. 67, *Welsbach Co.* v. *American Co.*, 98 Fed. 613) was as follows:

1. The herein described improvement in strengthening incandescent mantles consisting in coating the completed mantle with paraffine *or other suitable material*, substantially as set forth.

This claim had been held to cover a *hot* and a *cold* solution because of differences in the United States patent.

The Claims of the English patent to the Rawsons, No. 11,161, of 1886, (see case on appeal, p. 306, *Welsbach Co. v. American Co.*, 98 Fed. 613) for this part of the invention, were as follows:—

2. The treatment of the mantles after ignition by immersion in a liquid which will afterwards *set* and will burn away without prejudicial results to the mantles for the purposes set forth.

3. The use of paraffin substantially as described in the treatment claimed under the second claim.

These claims, the English court and Judge Lacombe held, were limited to the use of a *hot* solution (see opinion of Justice Wills in *Sunlight Inc. Gas Lamp Co.* v. *Inc. Gas-Light Co.*, 14 Rep. of Pat. Des. & Trade Cas. 757, and opinion of Judge La-

combe in *Welsbach Light Co. v. Rex Inc. Light Co.*, 94 Fed. 1006).

> (*p*). *Broadening or narrowing the invention of the home patent, or changing the form of the claims from process to product, will not save the home patent. If a structure made pursuant to the prior foreign patent will infringe the home patent, the latter expires with the former. This, say Judges Coxe and Wheeler, is the essence of the test.*

In *Clark* v. *Wilson*, 28 Fed. 95, Judge Wheeler held, as stated in the head note, that;—

> "1. A patent which is a mere adaptation of a foreign patent expires in this country at the same time with the foreign patent (Rev. St. § 4887)."

In *Clark* v. *Wilson* a slight addition, not constituting a different invention, had been made to the United States patent. This Judge Wheeler held narrowed the United States patent and brought it within the scope of the English patent, instead of making it for a different invention. "What would infringe the American patent," he said, "would infringe the English patent, and what would infringe that was made free to the public by the expiration of that and the corresponding American patent." Here we have a *narrowing* of the invention in the United States patent, while in *Welsbach Light Co. v. the Rex Inc. Co. supra*, we had a *broadening* of the invention in the United States patent; nevertheless, in each case it was held that the United States patent was granted for an invention previously patented in the foreign country and that the United States patent expired with the prior foreign patent.

In *Holmes Electric P. Co.* v. *Metropolitan Co.* 33 Fed. 254, Judge Coxe held that although the claims of the United States patent took "*a much wider*

range" than the claims of a prior United States patent, and a prior foreign patent, nevertheless the patentee had by the second United States patent attempted to claim the same invention *more broadly*, and he accordingly held, not only that the second United States patent was void for double patenting, *but also* that under the decision of the Supreme Court in *Siemens' Adm'r.* v. *Sellers*, the United States patent expired with the prior foreign English patent, and quoted, in support thereof, the part above quoted from the opinion of the Supreme Court in *Siemens' Adm'r.* v. *Sellers*.

In *Accumulator Co.* v. *Julien Electric Co.*, 57 Fed. 605, Judge Coxe held that a United States patent expired with a prior Spanish patent, although the claim of the Spanish patent was for a product and the claim of the United States patent was for a process. "The two patents were," he said, "for the same invention" following *Plummer* v. *Sergeant*, 120 U. S., 442 and *Mosler Safe Co.* v. *Mosler*, 127 U. S. 354, where the Supreme Court held that: "Although there are two patents, one for a process and the other for a product, there is in fact but one *invention*." In the same case (p. 607) Judge Coxe also stated that the tests for identity between a home patent and a foreign patent come down to the question "*Will a structure made pursuant to the foreign patent infringe the domestic patent?*"

In *Oval Co.* v. *Sandy Co.*, 60 Fed., 285, 289, the same principle was stated and applied by Judge Coxe.

In *J. L. Mott Iron Works* v. *Henry Co.*, 80 Fed. 516, Judge Wheeler said;— (p. 518)

> "*The Canadian patent is for this balanced float valve, in combination with other parts*, in a tank for intermittent supply; and the United States patent is for the same thing, *in*

various combinations with other parts in such a tank. They appear to be for the *same invention, in substance*, and by the expiration of the former the latter was ended. Bill dismissed."

In *Atlas Co.* v. *Simmonds Co.*, 102 Fed. 338, Judge Buffington held that "it is not essential that the foreign patent shall be the equivalent of a patent granted by the United States, either as to the length of the term or the breadth of the exclusive rights secured to the grantee."

In *Williams Co.* v. *Miller Co.*, 108 Fed. 967, and 115 Fed. 526, Judge Wheeler applied the test of *Commercial Mfg. Co.* v. *Fairbank Co.*, *supra*, and held that the devices of a prior British patent would infringe the claims of the United States patent, and that the United States patent, therefore, expired with the British patent.

POINT THREE.

Berliner Patent in suit No. 534,543, of February 19, 1895, was granted for inventions previously patented by Berliner in France, by Berliner French patent No. 207,090, of July 19, 1890. The term of the patent in suit, therefore, expired with the expiration of the term of the prior French patent on July 19, 1905, before the motions for preliminary injunction were made.

(*a*). *French patent No. 207,090 is new evidence. Defendants' affidavits show that it was granted for inventions for which the patent in suit was granted.*

French patent No. 207,090, of July 19, 1890, to

Berliner was not set up in the answer or offered in evidence in the prior suit. It is new matter absolutely. A certified copy of the patent forms part of defendants' exhibits (stipulation, T. case, p. 556; L & C case, p. 542). A copy of the drawings and a translation of the specification of the patent are found in the record (pp. 126-131).

That the inventions described and covered by the French patent are identical with inventions described and covered by the patent in suit and for which the patent in suit was granted, is shown by defendants' affidavits (Aff. Hicks, pp. 86-88, 82-85, fols. 256-262, 245-253; aff. Ensign, pp. 99-101, fols. 297-303; aff. Leeds, pp. 116-119, fols. 348-355).

(*b*). *French patent No. 207,090, according to the French law expired July 19, 1905.*

According to the French Law, the longest duration of a patent is fifteen years (p. 176, fol. 527). It appears upon the face of the French patent No. 207,090 of July 19, 1890, that it was granted for the period of fifteen years from that date, (p. 126, fol. 377). It is clear, therefore, that the French patent is a prior patent to Berliner for the same inventions, for which the patent in suit was granted, that it expired July 19, 1905, and that, if we disregard the expiration of the patent in suit on November 7, 1902, with the prior German patent, the patent in suit expired with the French patent on July 19, 1905.

(*c*). *The description and claims of the prior French patent and of the patent in suit for inventions for which the patent in suit was granted.*

Referring to the specifications and drawings of the French patent No. 207,090, to Berliner, it ap-

pears that Figures 1 and 2 illustrate Berliner's recorder or recording diaphragm and stylus, and that Figures 3 and 4 illustrate Berliner's reproducer or reproducing diaphragm and stylus. Since we have just considered the reproducer in connection with the prior German patent, it will be more convenient to consider first the reproducer and then the recorder of the French patent, and compare them with the reproducer and recorder of the patent in suit.

The reproducer shown in Figures 3 and 4 of French patent No. 207,090 is identical with the reproducer shown in figures 6 and 7 of the patent in suit. There is the same diaphragm B mounted in the same casing A. There is the same leaf-spring FH bent at right angles so that the face of one part is perpendicular to the face of the other part. The one part of the leaf-spring faces the face of the diaphragm and is secured at the end to the casing at P, while the free end of the leaf-spring crosses the diaphragm casing edgewise, just as in the United States patent. Where the leaf-spring crosses the diaphragm casing edgewise the leaf-spring comes in contact with the casing and presses against the casing. The French patent says (p. 127, fol. 381);—

> "In the reproducing sound-box, 3, 4, the extremity of the acoustic spring H, carrying a ring of caoutchouc G, presses against the casing of the sound-box. From the point of view of reproduction this is more advantageous than if the spring were free, as in the recording sound-box, 1, 2."

The leaf spring of the French patent is provided with a ring of caoutchouc or rubber G, just as is the leaf spring of the United States patent, "so that this envelope dampens the individual vibrations of the acoustic spring" (p. 128, fol. 383). In the

French patent there is the same block M attached to the free end of the leaf spring in which, by means of the set screw N, the stylus O, having the same wedge-shaped point, shaped for engagement with the record, is secured in precisely the manner described in the United States patent. Also in the French patent the leaf-spring is connected with the center of the diaphragm by the pin I which is secured by the casing L, and the screw Q. The pin I is fixed in the same manner for the connection of the leaf spring with the diaphragm and the same means exist for fixing or regulating the *tension* between the leaf spring and diaphragm. In the tube C, leading from the diaphragm casing, is the perforated diaphragm D to render the tone more clear, just as in the United States patent the perforated diaphragm 114 is inserted in the tube 90 for the same purpose. Thus it appears that the reproducer of the French patent is identical in every particular with the reproducer of the United States patent, and would infringe claims 24-34 of the United States patent quoted *supra* under Point Two, Subdivision (*c*), pp. 40-42.

Referring now to the recorder of the French patent illustrated in Figures 1 and 2 thereof, and comparing it with the recorder of the United States patent illustrated in Figures 4 and 5 thereof, it appears that *every feature of the recorder of the French patent is embodied in and forms part of the recorder of the United States patent.* The eccentricity of the leaf spring in the recorder of the United States patent is a mere detail which, as Judge Wheeler held in *Clark* v. *Wilson*, 28 Fed. 95, referred to, *supra*, under Point Two, Subdivision (*p*), p. 77, merely narrows the United States patent and brings it within the scope of the French patent.

Moreover, the leaf-spring is so mounted upon the

diaphragm and diaphragm casing that its eccentricity can be done away with and the leaf spring made to extend along the line of a diameter of the diaphragm (see Fig. 4, patent in suit; aff. Leeds, p. 118, fol. 353-354; aff. Ensign, p. 101, fol. 301; aff. Hicks, p. 83, fols. 248-249).

What then are the features of the invention of the recorder of the French patent and of the recorder of the United States patent? Referring to figures 1 and 2 of the French patent and to the specification thereof (pp. 126-131), it appears that there is the diaphragm B mounted in the casing AA with a tube C leading from the diaphragm casing and having a perforated diaphragm D in the tube to render the tone more clear. Extending across the face of the diaphragm is the leaf spring or acoustic spring FH, composed of two parts F and H joined together so that the face of the part H is at right angles to the face of the part F. It will be noted that the leaf spring in the recorder is formed, not by twisting a single piece of metal so that the parts shall be at right angles the one to the other, but by joining together two separate thin strips of metal so that the parts shall be at right angles the one to the other. The specification of the patent states (p. 126, fol. 378) that the acoustic spring FH may be "composed either of two springs placed at right angles the one to the other, as in figures 1 and 2, or of a spring bent as in figures 3 and 4." It is well to observe here that in figures 3 and 4 of the French patent the reproducer is shown having a leaf spring which is bent and in figures 6 and 7 of the United States patent the reproducer is shown having the leaf spring similarily bent; but in the recorder shown in figures 1 and 2 of the French patent and in figures 4 and 5 of the United States patent the leaf spring or acoustic spring is composed of two parts joined

together at right angles "by soldering or otherwise," as stated in the patent in suit (p. 3, line 54). Continuing now with the description of the recorder in the French patent, the leaf spring is connected with the center of the diaphragm by the pin I and nuts KK serve to regulate the *tension* between the leaf spring and the diaphragm (p. 127, fol. 379). One end of the leaf spring is secured to the diaphragm casing while the other end is free to vibrate and crosses edgewise the diaphragm casing. The leaf spring faces with its flat side the face of the diaphragm. In order to dampen the individual vibrations of the leaf spring, one or more bands of rubber G are placed upon it. The free end of the leaf spring is bent in its normal position, but opens so as to become straight when it presses upon the tablet for the recording of the sound waves (pp. 127-128, fols. 380 and 383). Such are the features of the recorder of the French patent.

The seven claims of the French patent, broadly covering both the reproducer and the recorder of the patent in suit, are as follows (p. 128);—

> 1. An apparatus for *recording* and *reproducing* sound-waves, composed of a diaphragm and of a vibrating spring or leaf placed transversely over the latter and of which one end is fixed while the free end is in contact with the surface recording the sound waves.
>
> 2. An apparatus for *recording* and *reproducing* sound-waves, composed of a diaphragm, of an acoustic spring placed over the diaphragm and attached to it, a spring which is in part surrounded by gutta-percha, felt or by other like material, so that this envelope dampens the individual vibrations of the acoustic spring.
>
> 3. An apparatus for *recording* sound-waves, composed of a diaphragm and of an acoustic

spring connected with it, the free end of which is bent in its normal position but opens, so as to become straight, when it presses upon the tablet for the recording of the sound-waves.

4. An apparatus for *recording* sound-waves, composed of a diaphragm, of an acoustic spring placed over it and of a pin which connects the spring to the diaphragm in such manner that the tension between it and the acoustic spring can be regulated.

5. An apparatus for *reproducing* sound-waves, composed of a diaphragm, of an acoustic spring placed over it and of a casing at the free end of the acoustic spring, into which casing one point of a needle is fixed in such manner as to be able to be taken out of it and replaced without difficulty.

6. An apparatus for *reproduction* of sound-waves, composed of a diaphragm, of an acoustic spring placed over it and of a casing at the middle of the spring, which casing is traversed by a separate pin establishing the connection with the diaphragm or spring.

7. An apparatus to *reproduce* sound-waves, composed of a diaphragm, of a casing for the diaphragm and of an acoustic spring placed over the diaphragm and connected to it, while its free end presses upon or against the casing.

Referring to the patent in suit and figures 4 and 5 thereof, and the description of the recorder at p. 3, lines 3-109, it appears that the recorder of the United States patent has the same casing 40 and 57, the same diaphragm 56 mounted therein, the same acoustic spring or leaf spring composed of two parts 61 and 62 joined together so that the parts are at right angles to each other and one end is secured to the diaphragm casing while the other end is free to vibrate. The free end 62 is normally curved, 62′, but opens so as to become straight when the stylus impinges upon the record tablet preparatory to the making

of a record (patent in suit, p. 3, lines 93-109.) The leaf spring is connected with the center of the diaphragm, and by means of the screw 66, the tension of the diaphragm may be regulated. In the tube 39 leading from the diaphragm casing is the perforated disc 67, just as in the recorder of the French patent. While unquestionably the recorder of the United States patent shows some differences and modifications, it is also unquestionably true that every feature of the recorder of the French patent is embodied in, and forms part of the recorder of the United States patent, and the main features of the recorder of the United States patent are all embodied in the recorder of the French patent. In the patent in suit the main features of the invention embodied in the recorder are set forth in claims 7, 9, 10, 25 and 31, which read as follows:—

> "7. In a gramophone, the combination of a sound receiving diaphragm and an elastic recording stylus controlled by the diaphragm and adjustable with reference to a record tablet so as to press by its own elasticity upon the same at right angles to the plane of its vibratory movements, substantially as described."
>
> "9. In a gramophone, a recording stylus composed of a leaf spring terminating in a tracing point in combination with one or more elastic non-sonorous dampers, substantially as described."
>
> "10. In a gramophone, a recording stylus formed of a leaf spring terminating in a tracing point in combination with one or more sleeves of soft rubber upon the leaf spring for damping the same, substantially as described."
>
> "25. In a gramophone, the combination of a diaphragm and a stylus carrier composed of a leaf spring twisted at one point so as to bring the edge of one portion at right angles to the

face of the other portion, whereby it is elastic in two directions, substantially as described."

"31. In a gramophone a recording stylus pivoted to move in response to the vibrations of a diaphragm and elastic in a plane at right angles to such motions, substantially as described."

The foregoing like the claims of the French patent, are all broad claims is no way limited by any special details or special improvements of the recorder of the United States patent. Unquestionably, the foregoing broad claims would be infringed by a recorder made according to the French patent.

Claims 6, 8 and 16 of the patent in suit read as follows;—

6. "In a gramophone, a recording stylus pressing by its own elasticity upon the record tablet at right angles to the plane of its vibratory movements and consisting of a leaf spring terminating in a point of *harder material* than that of the body of the stylus, substantially as described."

"8. In a gramophone a recording stylus pressing by its own elasticity upon the record tablet at right angles to its plane of vibratory movements, and consisting of a leaf spring terminating in an *iridium* point, substantially as described."

"16. In a gramophone a sound receiving diaphragm and a tube for conveying sound waves thereto in combination with a recording stylus receiving motion from the diaphragm, and a *screw* mounted in the sound conveying tube bearing centrally upon the diaphragm for adjusting the tension of the latter, substantially as described."

These claims according to the decision of Judge Wheeler in *Clark* v. *Wilson*, *supra*, 28 Fed. 95, are mere adaptations of the recorder of the French

patent not constituting any separate invention but narrowing the United States patent and bringing it within the scope of the prior French patent.

A stylus or leaf spring "terminating in a point of harder material" or "in an irridium point" had been described in nearly all of Berliner's prior patents and was old. (See English patent No. 7204 of 1888, p. 3, line 20; French patent 190,602, record, p. 124, which is the same as the said English patent; German patent No. 47,099, record, p. 150, fol. 448; U. S. patent No. 564,586; p. 5, lines 34-43). On May 16, 1888, in his lecture before the Franklin Institute, Berliner described "an irridium pointed stylus" (p. 276, fol. 808; p. 268, fol. 803). To make such a point a part of the recording stylus of the patent in suit was obviously a mere adaptation of the stylus of the French patent, narrowing the United States patent and bringing it within the scope of the French patent.

Claims 11, 12, 13, 14 and 15 of the patent in suit also cover the recorder and are also narrowed by the element of the eccentricity of the stylus carrier or leaf spring. This eccentricity may be a patentable improvement, but under the decisions of the Supreme Court in *Siemens' Adm'r* v. *Sellers*, and other cases cited *supra*, under Point Two, cannot save the patent.

Clearly the *reproducers* covered by the French and United States patents are identical, and clearly the *recorders* covered by the French and United States patents are identical as to the main features thereof. Judge Townsend so found. The French patent has seven claims above quoted, *covering broadly* the recorder and reproducer (pp. 128-129). It is familiar law, however, that claims form no essential part of a French patent.

There is no requirement for claims in the French law (p. 177, fols. 529-530). A French patent should, therefore, be construed as Judge Severens construed the Italian patent without claims in *Western Electric Co.* v. *Citizens' Tel. Co.*, 106 Fed. 215, quoted *supra* under Point Two. This question, however, is not material, since, it appearing that the inventions covered by the French patent are inventions for which the United States patent was granted, it matters not whether the claims of the one patent be broader or narrower than the claims of the other patent. The claims of the two patents are equally broad. No case can be found where identity of claims has been made the test. The test is whether the United States patent was granted for an invention previously patented in a foreign country. This question is answered by determining whether a structure made in accordance with the foreign patent will infringe the United States patent, that is any claim thereof. If so, the home patent was granted for an invention previously patented in a foreign country and expires with the foreign patent.

(d). Judge Townsend found that French patent No. 207,090 covers the improvements of the patent in suit in the recorder and reproducer.

Judge Townsend, in the suits at bar, found (T. case, p. 336; L. & C. case, p. 320);—

> "The drawings of the German patent are substantially identical with Figures 6 and 7 of the patent in suit and the specifications describe and the claims cover these constructions. The same is true, (barring the claims which are immaterial) of said French patent.
>
> * * * *
>
> "The French patent and the claims of the German patent cover improvements in details of the construction of Berliner's recorder and reproducer."

POINT FOUR.

Berliner patent in suit No. 534,543, of February 19, 1895, expired before suit was begun, on November 8, 1901, with English patent No. 15,232, of November 8, 1887; and on November 7, 1902, with German patent No. 45,048, of November 8, 1887; and on November 8, 1902, with French patent No. 186,827, of November 8, 1887.

(*a*). *This defense of expiration is based upon the opinion of the Circuit Court of Appeals in the prior suit.*

The fourth point rests upon three prior Berliner patents, to wit: English patent No. 15,232 of Nov. 8, 1887, German patent No. 45,048 of Nov. 8, 1887 and French patent No. 186,827 of Nov. 8, 1887. The fourth point is a defense of expiration *based upon what the Circuit Court of Appeals held* to be the invention covered by claims 5 and 35 of the patent in suit. No one of the three patents upon which the defense is based was in evidence in the prior suit, and no defense of expiration was made in the prior suit. As the defense is established by the opinion of the Circuit Court of Appeals, it is immaterial that these three prior Berliner patents of the defense were mentioned in the answer in the prior suit, since they were not offered in evidence and since the defense of expiration was not made in any form in that suit. Comity has no application to questions *not considered* by the prior court, or, in patent cases, to alleged anticipating devices which were not laid before that court. As to such the action

of the Court is purely original. (Mast, Foos & Co. v. Stover Mfg. Co., 177 U. S., 485 and 89 Fed., 333 (C. C. A.); Page v. Holmes Co., 2 Fed. 330, 336; Stahl v. Williams, 52 Fed. 648, 650.)

(*b*). *The inventions covered by the three patents mentioned were "previously patented" in the foreign countries.*

English patent No. 15,232, of November 8, 1887, one of defendants' exhibits, (T. case, p. 532; L. & C. case, p. 518), was granted for the term of fourteen years, from November 8, 1887, was published December 31, 1887 and was sealed February 17, 1888 (aff. Hicks, p. 82, fol. 244). It was, therefore, previously patented.

German patent No. 45048 of November 8, 1887, another of defendants' exhibits, was patented, as appears from the face thereof (p. 132, fol. 395) from November 8, 1887, and was published November 2, 1888. This being Berliner's primary German patent, its duration, according to the law of Germany (p. 179, fol. 537) was for fifteen years. This patent also was previously patented.

French patent No. 186,827 of November 8, 1887, another of defendants' exhibits, was, as appears from the face thereof (p. 123, fol. 368) granted for the term of fifteen years from November 8, 1887, and was delivered to the patentee, Berliner, on January 26, 1888. It was, therefore, previously patented.

(*c*). *The three prior foreign patents mentioned, each, cover the invention of Berliner's home patents No. 564,586 and No. 372,786.*

A comparison of the three English, German and French patents mentioned to Berliner with United States patent No. 564,586, of July 28, 1896, shows that the English, German and French patents cover the invention of United States patent No.584,-

586 and also the invention of Berliner's basic United States patent No. 372,786, of November 8, 1887. The drawings of the three English, German and French patents mentioned are identical, and figures 1-7 thereof are identical with figures 1-7 of Berliner's basic United States patent No. 372,786, and figures 8-16 thereof are identical respectively with figures 1-9 of the United States patent to Berliner No. 564,586. By stipulation (T. case, p. 554; L. & C. case, p. 540) the drawings of the German and French patents are not reproduced in the record and the drawings of English patent 15,232 of 1887 are to be used as the drawings of the German and French patents. Figures 10 and 11 of United States patent No. 564,586 are omitted in the three English, German and French patents mentioned. That the three English, German and French patents cover the inventions of United States patent No. 564,586 is so obvious that it is hardly necessary to discuss the question. In United States patent No. 564,586, it is stated in the specification (p. 1, lines 14-17) that the invention is an improvement upon No. 372,786 and has been previously patented in Great Britain by No. 15,232, of November 8, 1887. The French patent is identical with the English patent, it being merely a translation thereof (record, p. 123, fols. 368-372). While the language of the German patent is somewhat different, the German patent describes and claims, without question, the same invention. That the English, German and French patents mentioned cover the invention of United States patent No. 564,586 is further shown in defendants' affidavits (aff. Hicks, p. 91, fols. 271-285; aff. Ensign, p. 103, fols. 308-332; aff. Leeds, p. 119, fol. 355), where the identity of various claims and the identity of the inventions are fully pointed out with reference to the different patents.

(d). The Circuit Court of Appeals held, in the prior suit that claims 5 and 35 in suit, broadly cover the invention of patent No. 564,586; hence, they cover the same invention previously patented in the three foreign patents mentioned.

It has been held by the Circuit Court of Appeals, as will be presently shown, that claims 5 and 35, in suit, claim broadly the invention of United States patent No. 564,586. It follows, therefore, *if such holding be correct*, that claims 5 and 35 cover broadly the invention of the three prior English, German and French patents mentioned to Berliner, and that the patent in suit expired, with each of the three prior foreign patents mentioned, before the beginning of suit, at the dates above given.

The Circuit Court of Appeals in disposing of the defense of prior use set up in the suit between these complainants and the American Graphophone Company upon the patent in suit, said;—

> "The specifications in that application (for 564,586) were full enough to warrant the making of the claims here in controversy (5 and 35); at any time the application might have been amended by adding such claims, and in our opinion it is immaterial that instead of thus amending it, he took the *broader* claims on another application filed while the first was pending. The second may fairly be considered a *continuation* of the first, and thus Berliner's application antedates the public use."

The deduc. from the foregoing statement of the Circuit Court of Appeals is that claims 5 and 35 of the patent in suit are "*broader claims*" for the invention set forth in No. 564,586, that Berliner made his application for a patent for that *invention* when he applied for No. 564,586 on November 7, 1887, and that the application for the patent in

suit may fairly be considered as a continuation of the first application filed November 7, 1887. While claims 5 and 35 may be "*broader claims*," they are claims for the invention covered by No. 564,586.

> (*c*). *If the invention of claims 5 and 35, in suit, is not the same as the invention of patent No. 564,586, then defendants' new defence of two years prior, public use is a valid, complete defence, proven beyond a reasonable doubt.*

If the invention of claims 5 and 35 of the patent in suit is not a part of the invention set forth and claimed in No. 564,586, but is a different invention, then Berliner did not apply for a patent on the invention of claims 5 and 35 on November 7, 1887, and the defense of prior, public use set up by the Graphophone Company and the new defense of prior, public use set forth in defendants' affidavits of Martin and Wetzler (pp. 191-197), and the article in the Electrical World of August 18, 1888, (p. 274) are available. But the Circuit Court of Appeals held squarely that claims 5 and 35 of the patent in suit cover broadly the invention of No. 564,586; and did not hold that the specification of No. 564,586 was bad for duplexity of invention.

Clearly the Circuit Court of Appeals, in holding that claims 5 and 35 of the patent in suit cover broadly the invention of No. 564,586, understood Judge Hazel to have held the same point, when in his opinion he said;—

> (p. 66). "In the patent to Emile Berliner, No. 564,586, issued on July 28, 1896, application filed November 7, 1887, the process of recording and reproducing sound vibrations differs essentially from the method used in the phonograph and the graphophone. The specification described a process by which the sounds were inscribed upon a layer of non-resisting material; which was afterwards copied

in a non-yielding material, from which the sounds were reproduced. The specification says:

> 'The original record, as well as the copy of the same, is thus obtained as an undulatory line of even depth, as distinguished from the line of varying depth obtained by the ordinary phonograph and graphophone.'

It is not disputed that such mode or process was a new and meritorious invention and that it was not merely a patent for the functional effect of the machine in connection with which it was used. *The earlier specification does not claim the method nor the details of construction of the claims in controversy;* hence it is contended by the defendant, as will presently appear, that there was a surrender or waiver thereof. In the patent in suit *two features of the invention* are mentioned, one concerning the process or mode of recording sound upon a record, the other as to the construction of the apparatus. . . . .

(p. 70) "That a complete disclosure was made of the described plan of mounting the reproducer diaphragm and stylus in the specification attached to the application filed November 7th, 1887, is freely admitted. Such disclosures consisted of a machine constructed in accordance with the drawing (Figure 10) of the earlier application. The diaphragm and stylus were mounted or suspended upon a conveyor arrangement having rollers. . . . .

(p. 71) "As already appears, the patent in suit was issued upon a later application than patent No. 564,586. Why the *broad claims* of the former were not made a part of the earlier application and specification does not appear. Defendant broadly contends that the fact of the omission by the patentee to claim the invention in the earlier application considered in connection with the above mentioned publication in the "Electrical World," and public exhibition, was an abandonment and forfeiture thereof."

The Electrical World, referred to by Judge Hazel, was the issue of Nov. 12, 1887 (p. 243). The Electrical World, relied upon by defendants in connection with the affidavits of Martin and Wetzler (pp. 191-197), is the issue of August 18, 1888 (p. 274), *not in evidence in the former suit.*

The affidavits of T. Commerford Martin (p. 191) and of Joseph Wetzler (p. 194) associate editors of the Electrical World at the time of the publication of the article of August 18, 1888, show that they, at the invitation of Berliner, witnessed an exhibition by Berliner of the reproduction of sound in the City of New York, by means of the improved gramophone. As a result of that exhibition, Mr. Wetzler wrote the article in the Electrical World for August 18, 1888. The article in the Electrical World is so short that it is not necessary to state here its contents in detail. However, the following clear description of the reproducing apparatus may be quoted (p. 274);—

> "Notwithstanding the simplicity of the etching process that of the reproducing apparatus is still greater. As shown in the accompanying engraving there is no gear or machinery of any kind except a small friction wheel which revolves the table having clamped down upon it the reproducing disc. The reproducing stylus connected to the diaphragm is permitted to rest by its own gravity in the reproducing groove of the record, and when the plate is made to revolve it not only vibrates the diaphragm and reproduces the sound but it also leads the diaphragm box across the disc from periphery to centre so that the record groove serves at the same time as a screw instead of a separate gear. The recording diaphragm and stylus are attached to a lever which is pivoted at a distance of about 18 inches from the centre line of the disc, and as it slowly swings across the disc it describes an arc of very flat amplitude. It may be objected that the motion given

by the hand to the disc would not be sufficiently regular but while it is true that it would be desirable to have a motor attached to the machine, there is no difficulty whatever in revolving the disc regularly by hand, and by hanging up a small pendulum to swing before the eyes of the manipulator he can regulate the revolving motion by the swinging of the pendulum."

Here then, we have a complete disclosure of the perfected gramophone on August 18, 1888, nearly four years prior to the date of the application for the patent in suit. Inasmuch as Berliner and Mr. Martin (affidavits Martin and Wetzler, pp. 191, 194) used the apparatus for the reproduction of sounds in the City of New York, we have a clear case of more than two years public prior use if Berliner is not entitled to the date of November 7, 1887, as the date of his application for the invention of the patent in suit. But the Circuit Court of Appeals has held that Berliner on November 7, 1887, made his application for a patent for the invention of the patent in suit when he applied for a patent for the invention covered by patent No. 564,586; and *defendants, therefore, contend upon that ground and upon other grounds herein fully set forth, that the patent in suit being for some of the features of the invention covered by patent No. 564,586 covers necessarily the invention covered by the three early Berliner English, German and French patents, and expired with said three patents long before this suit was begun. If, however, the invention of the patent in suit is not a part of the invention of patent No. 564,586, applied for November 7, 1887, and if in such case Berliner did not make his application for the patent in suit on November 7, 1887, then clearly the publication of the article in the Electrical World on August 18, 1888, and the use of*

the gramophone during the week preceding August 18, 1888, by Berliner and Mr. Martin, as set forth in the article itself and as stated in the affidavits of Messrs. Martin and Wetzler, is a defense clearly establishing more than two years prior public use of the invention, and the consequent invalidity of the patent if claims 5 and 35 are to be construed broadly and not limited by the improvements in the details of construction of the reproducer shown in figures 6 and 7 of the patent in suit.

> (*f*). *Berliner himself, in patent No. 564,586 asserts that the invention, illustrated in Fig. 10 of that patent and construed by the courts on the evidence in the prior suit to be the invention of claims 5 and 35 in suit, is a mere modification, embodying the main features of the invention of patent No. 564,586.*

More authoritative even than the opinions of the Circuit Court of Appeals and of Judge Hazel upon this point is the statement of Berliner himself in the specification of patent No. 564,586. In that patent Berliner first describes the drawings showing his apparatus from p. 2, line 7, to p. 3, line 54. He then describes the deposition of a suitable layer of ink upon the tablet and the making thereon of a phonatographic record by recording and the copying of that record by photo-engraving, from p. 3, line 55, to p. 4, line 45. He then describes the centering of the copied record upon the metal disc from p. 4, line 46, to p. 4, line 80. Berliner then states that "*the stylus is then adjusted with its point in engagement* with the outer end of the record groove and the weight 26 is allowed to descend. It will now be clear that *the stylus will be forced positively to follow the undulations* of the record and that the diaphragm vibrating under the stylus will emit the same

sounds which produced the original record, which sounds can be distinctly heard at the ear-piece 34" (p. 4, lines 80-89.) Having thus described his invention, Berliner in the very next line says;— "Both the process and the apparatus thus far described may be *modified* in various ways *without departing from the main features of* my invention" (p. 4, lines 90-94).

Then Berliner describes figure 10 as a modification of his invention, which he says *does not depart from the "main features" of his invention.* It is, therefore, *a part* of his invention and it *embodies the "main features"* of his invention described and claimed in patent No. 564,586. It is this description of Figure 10 contained in the specification of No. 564,586 to which the Circuit Court of Appeals referred when it said that claims 5 and 35 of the patent in suit were merely "broader claims" for the invention of No. 564,586, and might have been made in No. 564,586, and to which Judge Hazel referred in the passages above quoted from his opinion. In referring to figure 10 in the specification of No. 564,586 (p. 2, line 22) Berliner says;— "Figure 10 is a sectional elevation of a *modified form* of my reproducing apparatus."

The invention disclosed by Figure 10 was, therefore, made at the same time as the rest of the invention of patent No. 564,586 and was by Berliner embodied in his first application for a patent for that invention as a part thereof embodying the main features of his invention and not departing therefrom. Berliner did not invent the subject matter of claims 5 and 35 of the patent in suit before or after he invented the subject matter of the claims of No. 564, 586. As the Circuit Court of Appeals and Judge Hazel and Berliner himself say, claims 5 and 35 and the claims

of 564,586 cover one and the same invention, although claims 5 and 35 may be broader claims for the invention. After Berliner had filed his application on November 7, 1887, for No. 564,586, he caused to be published in the Electrical World for Nov. 12, 1887, (p. 243) a description of the Berliner gramophone. That description is one of defendants' exhibits, and a reading of it shows that in it Berliner set forth the features of his invention included in his application just filed on November 7, 1887. In the description in the Electrical World of November 12, 1887, is the statement that there are various means for making audible and enlarging vibrations of the reproducing stylus. After mentioning several, Berliner then says (p. 244);—

> "This suggests the plan of mounting a reproducing diaphragm and stylus on a carriage moving on rails and permitting the point of the stylus not only to vibrate, but also to push the carriage across the revolving disc, and thereby follow the volute of the sound record."

The evidence shows, therefore, that Berliner made his invention which was a *unitary* invention, consisting of several *features*, but still a *unitary* invention, and he applied for a patent for *that* invention, as the Circuit Court of Appeals has clearly held, on November 7, 1887, and that application the Circuit Court of Appeals said included the subject matter of claims 5 and 35 of the patent in suit.

> (*g*). *The evidence shows that the invention of claims 5 and 35 in suit, as construed by the Courts in the prior suit, on the evidence therein, is the same as the invention of patent No. 564,586 and of the three prior foreign patents mentioned.*

The point that claims 5 and 35 cover the same invention as the United States patent No. 564,586 and the corresponding English, German and French patents mentioned is so fully elaborated in defendants affidavits above referred to, that it is unnecessary to say more upon this subject (aff. Hicks, p. 91, fols. 271-285; aff. Ensign, p. 103, fols. 308-332; aff. Leeds, p. 119, fol. 355).

(*h*). *Two patents are for the same invention, although each attempts to cover separate features thereof. The finding of the Circuit Court that the three prior foreign patents do not show Fig. 10 of patent No. 564,586 is, therefore, immaterial.*

The question whether two patents cover one and the same invention has been considered by the Supreme Court in *Miller v. Eagle Mfg. Co.*, 151 U. S., 186. In order to hold that two patents are for one and the same invention, it is not necessary that each patent should cover the *same features* of the invention or that the terms of the claims should be alike. Hence, Judge Townsend's finding (T. case, p. 340; L & C case p. 324), that the English, French and German patents do not show Fig. 10 of the home patent No. 564,586, is immaterial. Two patents cover the same invention if they attempt to protect the same thing, although the terms of the claims may differ and *although each patent may attempt to cover separate features of the invention.* It is only when inventions are separate, distinct and independent that separate patents may be obtained therefor. A separate, distinct and independent improvement upon an invention is, the Courts says, an invention for which a separate patent may be obtained. Such an improvement does not, of course, inseparably involve the main features of the first invention and must be dis-

tinct therefrom in point of time (*Electrical Co.* v. *Brush Co.*, 52 Fed. 130, head note 10) and subject matter. In *Miller* v. *Eagle Mfg. Co.*, Mr. Justice Jackson, speaking for the Court upon this point, said;—

> (p. 198). "The result of the foregoing and other authorities is that no patent can issue for *an invention* actually covered by a former patent, especially to the same patentee, *although the terms of the claims may differ:* that the second patent, although containing a *broader claim*, more generical in its character than the specific claims contained in the prior patent, is also void; but that where the second patent covers matter described in the prior patent essentially distinct and separable from the *invention covered thereby* and claims made thereunder, its validity may be sustained.
>
> "In the last class of cases it must *distinctly appear* that the invention covered by the later patent was a *separate invention* distinctly different and *independent* from that covered by the first patent; in other words, it must be something substantially different from that comprehended in the first patent. It must consist in something more than a mere distinction of the breadth or scope of the claims of each patent. If the case comes within the first or second of the above classes, the second patent is absolutely void.
>
> "*It is insisted on the part of the appellee that 'whether this invention shall be protected in part of its features by one patent, and as to the rest by another, or shall be completely protected by a single patent, is a matter which concerns solely the patent office and the inventor'. Under the rule announced in the foregoing authorities this proposition cannot be sustained.*
>
> . . . . "It is settled also that an inventor may make a new improvement on his own invention of a patentable character, for which he may obtain a separate patent, and the cases cited by the appellee come to this point *and to this point only*, that a later patent

> may be granted where the invention is clearly distinct from, and *independent of* one previously patented."

Following *Miller* v. *Eagle Mfg. Co., supra,* the Courts have uniformly held that two patents cannot be obtained for the same invention, although each attempts to cover different features thereof. In *Otis Co.* v. *Portland Co.*, 127 Fed. 557-559, the Circuit Court of Appeals for the First Circuit said;—

> "Two patents may be regarded as for the same invention, though one claims only a *special* machine, and the other claims broadly a *genus* which includes the former. *Miller* v. *Eagle Mfg. Co.*, 151 U. S. 186, 198."

In *Dayton* v. *Westinghouse Co.*, 118 Fed. 562, the Circuit Court of Appeals for the Sixth Circuit, following *Miller* v. *Eagle Mfg. Co.*, said;—

> "This second patent was held void, for the reason that there was no new invention; the invention having patented *simply a part* of the invention previously patented. . . . .
>
> "And in the *Palmer Pneumatic Tire Co.* Case (90 Fed. 732), this court, following the *Miller* case, said:
>
> 'That decision shows that it is not necessary to the rule that patents should be for co-extensive inventions, or that the subject matter thereof should be technically the same.'"

In *Sawyer Spindle Co. v. Carpenter*, 133 Fed. 238, 240, Judge Brown said;—

> "Two patents and two claims may be regarded as for the same invention, though one claims only a special machine and the other claims broadly a genus which includes the former. *Otis Elevator Co.* v. *Portland Co.*, 127 Fed. 557 (C. C. A.), *Miller v. Eagle Mfg. Co.*, 151 U. S. 186."

In the foregoing argument under this point, the

proposition has been that claims 5 and 35 of the patent in suit cover the invention of patent No. 564,586, and, therefore, cover the invention of the prior English, German and French patents mentioned. The distinction between an *invention* and broad or narrow *claims* covering the different *features* of the invention is here important. The patent in suit, therefore, expired with each of the prior foreign patents mentioned.

> (*i*). *It may, in addition, be noted that claims 31 and 32 and 6 and 8 of the patent in suit would be infringed by the lever and stylus of the prior German patent mentioned.*

But specifically, it may be noted, that claims 31 and 32 of the patent in suit would be infringed by the two armed lever *s* described in claim 2b and the stylus 29, described in claim 4b (record, pp. 143-144, fols. 428 and 430) of German patent No. 45048, of November 8, 1887. The main contention here, however, is, for example, that claims 5 and 35 of the patent in suit and claim 8 of No. 564,586, and claim 9 of English patent No. 15,232, of 1887, are for one and the same invention, as fully explained in defendants' affidavits above referred to, under Subdivision (*g*) of this point (p. 100).

Claims 31 and 32 of the patent in suit read as follows:

> "31. In a gramophone a recording stylus pivoted to move in response to the vibrations of a diaphragm and elastic in a plane at right angles to such motions, substantially as described.
>
> "32. In a gramophone, a reproducing stylus having a wedge-shaped point engaging the walls of the record groove, substantially as described."

Claim 2b and claim 4b of German patent No. 45048 read as follows;—

> "2. An apparatus adapted for the use of the coating characterized under 1 for the reception of phonautographic records, characterized by;
>
> b) A two armed lever *s* fastened at the center of the diaphragm (or of the sonorous body) and attached pivotally to the casing (or at the edge) of the same, the free arm of which, pointed at the end, stands at right angles to the axis of the drum and approaches so far toward the same that its point strips off the covering of the paper strip in the direction of a line winding off as a straight or spiral line.
>
> "4. An apparatus adapted for the use of the coating characterized under 1 for the reception of phonautographic records, characterized by;
>
> b) A stylus (29) consisting of elastic stiff parts joined with each other and in like manner as under 2b), yet elastically, joined with the diaphragm (or the sonorous body), the point of which removes the coating of the disc in the direction of the recorded line—and, after the loosening of the adjusting collars connecting the bearing (7) with the shaft 16, in a circle."

In U. S. patent No. 564,586, Berliner made no claims similar to claims 31 and 32, above quoted, of the patent in suit; but the German patent No. 45,048 is the obvious equivalent of U. S. patent No. 564,586. Thus we have additional proof that in the United States Berliner protected by the patent in suit and by No. 564,586 the invention which he previously patented in the three English, German and French patents mentioned.

Referring to Figs. 2, 8 and 9 of German patent No. 45,048, (see drawings of English patent No. 15,232 of 1887) it appears that the stylus *s* and the stylus 29 have wedge-shaped points which engage

the walls of the record groove as does the stylus 112 (Fig. 7) of the patent in suit which, as stated at p. 5, line 88, should, preferably, have a point which is "rather dull." In German patent No. 45,048 the stylus *s* is described (p. 135, fol. 403) and so is the stylus 29 (p. 140, fol. 418) as follows;—

> "The stylus 29, consisting preferably of a *flat* strip of phosphor bronze, pointed at its extreme end and suitably curved."

In claim 4b of the German patent the stylus 29 is further described as a recording stylus, and is said to be elastic. So the recording stylus 62 of the patent in suit (fig. 4) is curved and elastic. In the corresponding English patent No. 15,232 of 1887, it is said (p. 6, lines 46-51); "the stylus 29, which may be of metal or any other hard and fairly *elastic* material. Preferably, the stylus is made of a flat strip of phosphor bronze . . . . at its free end, the stylus is reduced to a point, and is curved upwardly." In U. S. patent No. 564,586 the same description of the stylus 29 is given (p. 3, lines 4-13).

Unquestionably, claims 31 and 32 of the patent in suit would be infringed by the stylus *s* and the stylus 29 of the claims 2b and 4b above quoted from German patent 45048. Hence, the same invention is protected by the two patents and the patent in suit expired with the German patent.

Claims 6 and 8 of the patent in suit, discussed *supra* under Point Three (p. 87), also cover the stylus 29 of the German patent No. 45,048, as will be seen from the positive explanation of it given in Berliner's home patent No. 564,586 (p. 5, lines 34-43).

> (*j*). *Claims 5 and 35 of the patent in suit, claim 8 of patent No. 564,586, and claim 9 of*

the prior English patent mentioned, for example, cover the same invention. Claims 5 and 35 could not, therefore, survive the expiration of the three prior foreign patents mentioned.

But with reference to the main contention that claims 5 and 35 of the patent in suit embody the broad invention of the three English, German and French patents mentioned, defendants' expert, Mr. Ensign, compares the three prior foreign patents with the two home patents No. 564,586 and the patent in suit (aff. Ensign, pp. 103-106, fols. 308-318) and in conclusion says (pp. 105-106, fols. 315-318);

> "It is thus perfectly clear that claims 5 and 35 carried from the specification of patent No. 564,586 to the specification of the patent in suit No. 534,543 cover and protect the invention, the identical invention claimed in United States patent No. 564,586, and in the corresponding English, French and German patents mentioned. Claims 8, 9, 10 and 13 of patent No. 564,586 are identical or substantially identical with claims 9, 12, 13 and 14 of the English and French patents, and the preceding method claims of the three patents are so clearly alike in the United States, English and French patents, that it is unnecessary to make any analysis of them, while the corresponding German patent claims the same things and methods according to the German practice Claim 9, for instance, of English patent No. 15,232, of 1887, reads as follows;—
>
> > '9. In a gramophone, the combination of a sound receiving diaphragm or other sonorous body; with a pivoted stylus controlled by a diaphragm, and controlling the same, and a support adapted to carry a phonautographic record sheet or a copy of such record, in solid resisting material, *travelling* in the plane of vibration of the

point of the stylus, substantially as described.'

It is perfectly clear that claim 9 quoted from the English patent is inseparably connected with the invention described in claims 5 and 35 of patent No. 534,543, and that the invention described and claimed in claims 5 and 35 of the patent in suit is inseparably connected with claim 9 of the English patent. They are, indeed, for one and the same invention, made at the same time prior to Berliner's application filed November 7, 1887 in the United States for patent No. 564,586, forming part of one and the same inventive act, differing perhaps in scope, but being for essentially the same invention and including, as Berliner himself states, all the main features of his invention."

So in another of defendants' affidavits the three foreign and the two home patents are compared (aff. Hicks, pp. 91-95, fols. 273-285), and it is pointed out (pp. 91-92, fols. 273-274) that after Berliner in patent No. 564,586 has described the gramophone recording and reproducing machine embodying the main features of his invention he states in the patent (p. 4, lines 83-89) that;—

"It will now be clear that the stylus will be forced positively to follow the undulations of the record, and that the diaphragm vibrating under the stylus will emit the same sounds which produced the original record, which sounds can be distinctly heard at the ear-piece 34."

And then (p. 4, lines 90-93) Berliner, in describing Fig. 10, says;—

"Both the process and the apparatus thus far described may be modified in various ways without departing from the main features of my invention."

In conclusion the affidavit states (aff. Hicks, p. 94, fols. 280-283;—

"Claim 8 of No. 564,586 reads as follows:—

> "8. In a gramophone, the combination of a sound-receiving sonorous body; with a pivoted stylus controlled by and controlling the same, and a support adapted to carry a phonautographic recording-surface, or a copy of such record in solid resisting material, *traveling* in the plane of vibration of the point of the stylus; substantially as described."

Claim 9 of English patent No. 15,232, of 1887, reads as follows;—

> "9. In a gramophone, the combination of a sound receiving diaphragm or other sonorous body; with a pivoted stylus controlled by a diaphragm, and controlling the same, and a support adapted to carry a phonautographic record sheet or a copy of such record, in solid resisting material, *traveling* in the plane of vibration of the point of the stylus, substantially as described."

Claim 35 in suit of patent No. 534,543 reads as follows;—

> "35. In a sound reproducing apparatus consisting of a *traveling* tablet having a sound record formed thereon and a reproducing stylus shaped for engagement with said record and free to be vibrated and propelled by the same, substantially as described."

> "Obviously the combination shown in the last claim, 35, is but a mere modification of the combination shown in the two previous claims above set forth, 8 and 9. And that is what Berliner himself states and what the Circuit Court of Appeals has also held. Claims 5 and 35 of patent No. 534,543, therefore, protect the same invention as English patent No. 15,232, of 1887."

In *Thomson-Houston Co.* v. *Hoosick R. Co.*, 82 Fed. 461, 465-467, Judge Townsend in the Circuit Court had held, as he held in the suits at bar;—

> "Whatever may be the rule as to cases

> where the application for the general patent was filed subsequent to the application for the specific patent I do not think the patentee should be deprived of his broad patent where the application for such patent was made first and was delayed in the patent office through no fault of the inventor."

Judge Wallace, speaking for the Circuit Court of Appeals, said;—

> "*With these conclusions we are unable to agree.* We should concur if we could regard the later patent as the generic one, and the earlier, so far as it relates to the contact device, as *limited* to the structural *improvements* upon that device." . . . .
>
> "'The matter sought to be covered by the second patent is *inseparably involved* in the matter embraced in the former patent, and this, under the authorities renders the second patent void,' *Miller v. Manufacturing Co.*, 151 U. S. 198.
>
> "It is manifest that both patents are intended to, and do, secure to the patentee the *same general inventions* as are comprised in the combination" etc.

Since the hearing of the motions for preliminary injunction, complainants have examined their expert, Mr. Rudolph M. Hunter. In answer to XQ121, Mr. Hunter testified as follows;—

> "I do not understand that the word 'traveling' as used in claims 1, 2, 3, 7, 8 and 13 of the patent 564,586, you refer to, as meaning the *longitudinal* movement of the record tablet or its supports. These words refer to the travel of the surface of the tablet due to its *rotation*."

What Mr. Hunter says is quoted by way of argument only and it obviously is correct. Clearly, therefore, claim 8 of patent No. 564,586, claim 9 of English patent No. 15,232, of 1887, above quoted, and claims 5 and 35 of the patent in suit, cover substantially and essentially the same in-

vention; and so the Circuit Court of Appeals held, when it said that claims 5 and 35 are broader claims for the invention set forth in No. 564,586.

(k). As above shown under subdivision (h) of this point, two patents cannot be secured for separate features of an invention. The invention of claims 5 and 35 in suit is a feature of the invention of patent No. 564,586, or it is not. If it is, then that INVENTION was previously patented by the three foreign patents mentioned and claims 5 and 35 expired with them; if it is not, then the application for patent No. 564,586, filed Nov. 7, 1887, was not an application for the invention of claims 5 and 35 and the new defence of two years prior, public use set forth under sub-division (c) of this point is valid.

The Circuit Court of Appeals has held, as above shown under sub-division (*d*) of this point that the invention of claims 5 and 35 is a feature of the invention claimed in patent No. 564,586 and Berliner has asserted that it is a mere modification, embodying the main features thereof and, therefore, inseparable therefrom. Upon such holding of the Circuit Court of Appeals this point is based, and, in accordance with that holding the claims 5 and 35 in suit expired with the three prior foreign patents mentioned.

(l). The new evidence in the suits at bar proves that Berliner was not the inventor of the invention of claim 5 and 35 as construed by the courts in the prior suit.

In conclusion of this point, it may be well to note here that, as hereinafter shown under point Eight, Berliner was not the inventor of the in-

vention of claims 5 and 35 *as construed by the courts in the prior suit*. The new evidence contained in the suits at bar, especially the Suess-Berliner Canadian patent No. 41,901, proves conclusively that Berliner was not the inventor thereof. Berliner himself so stated in the Canadian patent, in which, as Judge Townsend found, Berliner, as the assignee of Suess, "discloses and broadly claims the invention covered by the claims here in suit" *as the invention of Suess*. In the light of this new evidence a different and more limited construction must be given to claims 5 and 35, if they are to be held valid at all, in which case defendants do not infringe. This explains why it was that in patent No. 564,586 Berliner made no claim covering the modification of his invention shown in Fig. 10 of patent No. 564,586 and did not show Fig. 10 in the three prior foreign patents mentioned. That modification was the invention of Suess, who put it in practical form in the Canadian patent for which Berliner applied as Suess' assignee, claiming the invention as the invention of Suess *in the broadest possible form*,—a form which would cover Fig. 10 above mentioned and every other form (see claim 11 of the Canadian patent, p. 167, fol. 501). It will be understood that the argument of Point Four proceeds upon the assumption, shown by the new evidence to be incorrect, that Berliner was the inventor of the invention of claims 5 and 35 as construed by the Courts in the prior suit without such evidence.

POINT FIVE.

Grouping together the expired prior foreign Berliner patents discussed under Points Two, Three and Four, it is clear that the essence of the invention set forth in the various claims of the patent in suit was previously patented in foreign countries. There is no authority in the statute for holding that Claims 5 and 35 in suit can still survive.

Under sub-division (*m*) of Point One, it was shown that Berliner's basic invention and his and Suess' improvements thereon, shown by the patents in evidence, were patented in foreign countries before the grant of the patent in suit by patents which have all expired. More specifically, under Points Two, Three and Four, it was shown that the subject matter of numerous claims of the patent in suit was previously patented in foreign countries by patents which have all expired. Under such circumstances, it is impossible to derive from § 4887 of the Revised Statutes any tenable ground upon which to hold that the two claims in suit, 5 and 35, can survive the expiration not only of the numerous other claims of the patent in suit which concededly expired, but also the expiration of the very essence of the claims themselves, and the expiration of the various elements which enter into, permeate and underlie the claims. The policy of Congress was clearly defined in the Statute and there is no authority, as the Supreme Court said *in Bate Refrig. Co.* v. *Sulzberger*, 157 U. S. 1, 36, "to change the law by judicial action based upon some supposed policy of Congress."

In the three prior, Berliner, German patents and

in the three prior, Berliner, French patents discussed under Points Two, Three and Four, Berliner described and claimed his basic invention and all his improvements thereon. Nevertheless, the Circuit Court, departing from the clear meaning of the statute, has held that because, in its opinion, claims 5 and 35 cover the basic invention, they can survive not only the expiration of all the other claims of the patent in suit but also the expiration therewith of the term itself of the patent. It has been shown under Point One that claims 5 and 35 are not claims for any basic invention but are claims for improvements merely. But if claims 5 and 35 are claims for the basic invention, how then can they survive the expired, prior, Berliner, English, French and German patents which describe and claim the basic invention? Clearly, therefore, if claims 5 and 35 are claims for improvements merely, as indeed they are, they expired with the expiration of all the other claims for improvements; and if they are claims for the basic invention, they must have expired with the expiration of the prior Berliner foreign patents covering the basic invention.

The Circuit Court, by its decision, has involved the patent law in the endless confusion which the Supreme Court said would be the result of holding that a patent could have a plurality of terms. It is respectfully submitted that if the courts are to weigh the relative importance of the different claims of a patent and are to differentiate the various claims of a patent by holding that some of the claims are basic in their nature and that other of the claims are not basic in their nature, and are to hold, by judicial construction and not upon any provision of the statute, that, by reason of such subtle distinction, § 4887 of the statute does not apply in the one case and does apply in the other

case, the condition of uncertainty and confusion resulting therefrom would be intolerable. On the other hand, if the clear, simple meaning of the statute is applied, the intention of Congress will be carried out and all uncertainty and confusion avoided. And how, and by what rule, it may be asked, is the court to determine which claims are basic and which claims are not basic, when all the claims cover features of one invention? Is each patent to be a law unto itself? Is the question of expiration, under the statute, to be left to judicial discretion and discrimination? Or is the provision of the statute that "*every* patent granted for *an* invention which has been previously patented in a foreign country, shall be so limited as to expire with the foreign patent" to be applied according to its clear and unambiguous meaning and effect?

POINT SIX.

In Canadian patent No. 41,901, of February 11, 1893, to Berliner, assignee of Suess, Berliner asserted that a reproducing stylus, mounted to have a free movement, controlled by the walls of the record-grooves, over the surface of the rotating record tablet, was the invention of Suess. Unless, therefore, claims 5 and 35 of the patent in suit are limited to Berliner's improvements in the details of construction of his reproducer, Suess anticipated Berliner and claims 5 and 35 are invalid.

(a) The Canadian patent is set forth in the records and discussed in defendants' affidavits.

A certified copy of this Canadian patent (p.

155), of the assignment of the *invention* thereof by Suess to Berliner (p. 169) and of the proceedings by Berliner in the Canadian Patent Office to obtain the patent (pp. 169-175) form part of defendants' exhibits. The drawings of the Canadian patent are identical with the drawings of the Berliner-Suess United States patent No. 427,279, and for that reason it has been stipulated (T. case, p. 555; L & C case, p. 541) that the drawings of the Canadian patent need not be reproduced on appeal, but that the drawings of the United States patent No. 427,279 may be used on appeal as the drawings of the Canadian patent, as well as of the United States patent.

This Canadian patent is dealt with in defendants' affidavits (aff. Hicks, p. 88, fols. 262-271; Ensign, p. 101, fols. 303-308; Leeds, p. 119, fols. 356-357). The Court is respectfully referred to the affidavits for a discussion of this important Canadian patent.

> (b) *Judge Townsend correctly found that the Canadian patent "discloses and broadly claims the invention of the claims here in suit," as construed by the Courts in the prior suit; and erred in not further finding, as a result thereof, that unless a limited construction be put upon the said claims, they are invalid.*

Judge Townsend, comparing the specification and claims of the Canadian patent with the specification and claims of the patent in suit, found (T. case, p. 341; L & C case, p. 325) that "*the Canadian patent in terms describes and claims the broad generic invention of Berliner covered by the claims here in suit.*" Unquestionably such finding is correct, upon the construction given to the claims by the Courts in the prior suit. A comparison of the Canadian patent with the patent in suit leaves

no doubt of the correctness of such finding. When we consider that Berliner, as Suess' assignee of the *invention* (p. 169), made and signed the petition upon the application for the Canadian patent (p. 170) and set forth in the petition that Suess had "invented new and useful improvements in gramophones not known or used by others before his invention thereof" and that he, Berliner, "by an assignment bearing date the 13th day of April, 1891, *acquired the right* of obtaining a patent *from Werner Suess* aforesaid for the said invention," and prayed "that a patent may be granted to him as the assignee of the said Werner Suess for the said invention, as set forth in the specification in duplicate relating thereto," it is clear that Judge Townsend erred in not finding that unless claims 5 and 35 of the patent in suit are limited by Berliner's improvements in the details of construction of his reproducer, the said claims 5 and 35 were anticipated by Suess and are, therefore, invalid. After holding that "the Canadian patent in terms describes and claims the broad generic invention of Berliner covered by the claims here in suit," there was logically no escape, upon the evidence before the Court, from the further finding that unless claims 5 and 35 here in suit are to be limited, as above stated, they are invalid because, as Berliner himself states, the subject matter thereof was invented not by him but by Suess.

Judge Townsend, in his opinion, (T. case, pp. 340-341; L & C case, pp. 324-325), said;—

> "The fourth, fifth and sixth defences are founded upon a Canadian patent (No. 41901) to Berliner as assignee of Suess, upon which defendant lays great stress. *This patent discloses and broadly claims the invention covered by the claims here in suit.* It is contended that thereby Berliner admitted that Suess was the inventor of the reproducing apparatus in

suit; that by Berliner's application as assignee of Suess he abandoned the broad claims in suit, and that as the said Canadian patent covered said broad invention and expired in 1899, the patent in suit expired with it.

"The evidence introduced in the original suit showed and the Court found on the Suess Patent 427,279 that Suess was merely an improver of a particular form of swinging arm device and some of the language used in the specifications of this Suess Canadian patent, which, however, was not before the Court in the original suit, seems to indicate that its structure is merely an improvement on the broad Berliner invention, and Berliner himself afterwards applied for and obtained a Canadian patent for the broad invention covered by the claims here in suit.

"*But the Canadian patent in terms describes and claims the broad generic invention of Berliner covered by the claims here in suit, as will be seen from the following claims:*

> '5. In an apparatus for reproducing sounds from a record tablet, the combination with a reproducer mechanism consisting of a sound conveying tube and a diaphragm and stylus mounted at one end of the tube; of a freely swinging supporting frame for the said reproducer mechanism, substantially as described.
>
> '7. In an apparatus for reproducing sounds from a record tablet, the combination with a reproducer mechanism consisting of a sound conveyer, and a diaphragm and stylus mounted at one end thereof; of a supporting frame for the said reproducer, loosely pivoted to swing freely both laterally and vertically, substantially as described.
>
> '11. *In an apparatus for reproducing sounds from a rotating record-tablet, a reproducing stylus mounted to have a free movement over the surface of the record tablet, substantially as described.*'

> "I think, therefore, that if this patent expired as claimed in 1899 the patent in suit expired at the same time, upon the authority of the decisions cited above."

(*c*). *The new evidence in the suits at bar proves that the features of the gramophone here in controversy were the invention of Suess and in no particular the invention of Berliner.*

In the original suit between these complainants and the American Graphophone Company *neither* the Canadian patent *nor* Berliner's basic United States patent No. 372,786, of November 8, 1887, *nor* Berliner's first patent of improvement thereon, No. 382,790, of May 15, 1888, were in evidence. Suess, in his United States patent No. 427,279, taken out by Berliner as the assignee of Suess, stated (p. 1, lines 8-14) that his invention was an improvement

> "in the reproducing apparatus adapted for use in the method of recording and reproducing sounds set forth in Letters-Patent No. 372,786, of November 8, 1887, and No. 382,790, of May 15, 1888, both granted to Emile Berliner."

Substantially the same statement is made in the Canadian patent (p. 157, fols. 470-471). A comparison of the Canadian patent with the Berliner-Suess United States patent No. 427,279, shows that the descriptions of the two patents are substantially identical and that the drawings of the two patents are identical; but *the claims are radically different*. Comparing the gramophone of Berliner's early patents No. 372,786 and No. 382,790 with the gramophone of the Suess Canadian and United States patents, it is clear that the features of the gramophone here in controversy were entirely the

invention of Suess, and in no particular the invention of Berliner. Suess improved upon and departed radically from Berliner's broad invention of his basic patent No. 372,786. Suess' improvements only are here in controversy. As a mere inspection of the patents referred to will show this, no detailed argument is necessary to prove it.

> (*d*). *In the prior suit, complainants, in order to distinguish the Berliner-Suess home patent relied upon the absence of claims therein broadly covering the pivoted swinging arm and the stylus point adapted to be vibrated and propelled by the record-groove. The Berliner-Suess Canadian patent contains such broad claims and covers the invention of claims 5 and 35 in suit, as construed by the courts in the prior suit.*

In the original suit between these complainants and the American Graphophone Company, the Berliner-Suess United States patent No. 427,279 was in evidence and in order to avoid the effect of the disclosure of said patent, counsel for these complainants, on examination of his expert, Mr. Hunter, brought out the fact that in the Berliner-Suess United States patent there were no "claims broadly covering the pivoted swinging arm construction and talking machine in which the stylus point is adapted to be vibrated and propelled by the record-groove." Referring to page 100 of the record on appeal in the original suit, the following question was put to Mr. Hunter and the following answer was given by him thereto;—

> "Q. 13. Referring to Defendant's Exhibit, Suess Patent, kindly state whether you find therein any claims broadly covering *the pivoted swinging arm construction* and talking machine in which the stylus point is adapted to

be *vibrated* and *propelled* by the record groove?

A. There is no claim in the Suess patent broad enough to cover the construction mentioned in the question, nor any other means for securing generically the method of vibrating the stylus, and causing it to be fed across the record."

This however, is not the case with the Berliner-Suess Canadian patent, since as Judge Townsend says in his opinion, the Canadian patent "discloses and broadly claims the invention covered by the claims here in suit," and, "the Canadian patent in terms describes and claims the broad generic invention of Berliner covered by the claims here in suit, as will be seen from the following claims."

(c). *In the prior suit, because of the absence of the evidence contained in the records of the suits at bar, the courts were not apprised of the radical departure of Suess' improvements from Berliner's early gramophone and were not informed that defendants' machines, as to the features in controversy, embody only Suess' improvements.*

Because the Berliner-Suess United States patent contained no claims "broadly covering the pivoted swinging arm construction and talking machine in which the stylus point is adapted to be vibrated and propelled by the record-groove," as above pointed out by complainants expert in the original suit, and because Berliner's early United States patents were not in evidence, and because the Berliner-Suess Canadian patent now before the court was not in evidence, it is clear that neither Judge Hazel in the court below nor the Circuit Court of Appeals on appeal had any means of determining how far Suess had departed from Berliner in the improvements which he made and described in the two patents which he assigned to Berliner and

which Berliner applied for and took out, namely, United States patent No. 427,279 and Canadian patent No. 41901. A comparison of Suess' gramophone with the gramophone of the two early Berliner patents mentioned shows that a reproducing stylus mounted to have a free movement over the surface of the rotating record tablet and the movement of the stylus, under the control of the walls of the record-groove, across the face of the disc without any positive feeding mechanism was broadly and entirely the invention of Suess. Complainants' exhibits of defendant's machines are, in all their features, like Suess' gramophone shown in his Canadian and United States patents and broadly covered by the claims on Berliner's application in the Canadian patent.

> *(f). The claims of the Berliner-Suess Canadian patent prove that the movement of the stylus across the face of the record by means of the pressure exerted upon the stylus by the walls of the record-groove was the invention of Suess. This explains why that invention was never previously or subsequently claimed by Berliner and necessitates a limited construction of claims 5 and 35 in suit.*

The mere reading and inspection of the specification and broad claims the Canadian patent also shows at once that *the broad idea of moving the stylus across the face of the disc by means of the pressure exerted by the walls of the record-groove and without any other positive mechanism was the invention of Suess.* The attention of the court is directed especially to claims 11, 12 and 13 (p. 167) of the Canadian patent, and a comparison of those claims shows that claim 11 is so broad as to make it impossible to contend that Berliner invented the free movement of the reproducing stylus across

the face of the record. That invention, covered in its broadest possible form in claim 11 of the Canadian patent, Berliner asserted belonged to Suess. Berliner made this assertion and admission before he filed the application for the patent in suit and before he ever made any claim therefor in any patent or application. It is because the invention belonged to Suess and not to Berliner that Berliner made no claim therefor in his application filed November 7, 1887 for patent No. 564,586, and did not show the construction of Fig. 10 of that patent in his corresponding early foreign patents discussed, *supra*, under Point Four. It is because the invention belonged to Suess that in the patent in suit he does not claim, as shown under Point One, the reproducoing apparatus as a whole as his invention when referring to it at p. 4, line 95. Clearly the reproducing apparatus as a whole is nothing but the gramophone of Suess constructed according to the specification and *claims* of the Canadian patent (see claims 2, 3, 5, 7, 11-13, pp. 165-167). Referring to figure 3 of the patent in suit showing the reproducing apparatus as a whole, it is clear that it is entirely Suess' invention, except the special construction of the reproducing diaphragm and stylus or reproducer illustrated in figures 6 and 7. That unquestionably was Berliner's invention and claims 5 and 35 when properly construed must be limited by a stylus vibrating and constructed as shown in figures 6 and 7 and as described in the specification at p. 5, lines 34-102.

(g). Had the new evidence in the suits at bar been before the courts in the prior suit, the limitations of the invention of claims 5 and 35 in suit would have been clearly understood and stated.

If Judge Hazel had had before him Berliner's early patents Nos. 372,786 and 382,790, upon which Berliner and Suess in United States patent, No. 427,279, said the Suess invention was an improvement, Judge Hazel would have understood how radical was the departure made by Suess from Berliner's apparatus. If Judge Hazel had had before him the Berliner-Suess Canadian patent, he would have understood that when Berliner and Suess in his United States patent, No. 427,279, stated (p. 2, line 32), "that the construction of the *stylus* and the mounting therefor form no part of the present invention and are, therefore, not specifically described herein," all that they meant was that the reproducing diaphragm and stylus or *reproducer* such as that shown in figures 6 and 7 of the patent in suit formed no part of that invention but that *the mounting of the reproducer in such manner that the stylus could have a free movement across the face of the rotating disc by reason of the control over the stylus by the walls of the record groove and without any positive feeding mechanism was the invention of Suess and not the invention of Berliner*, as Berliner and Suess stated and as Berliner admitted in the Canadian application and the Canadian patent. Hence, Judge Hazel, had he had before him the early Berliner United States patents and the Suess-Berliner Canadian patent with its broad claims, would have held and must have held that Suess anticipated Berliner and that claims 5 and 35 of the patent in suit could be held valid, only upon an interpretation limiting them by the special form of reproducer shown in figures 6 and 7 of the patent in suit.

(*h*). *It is not reasonable to hold that what Berliner claimed in Canada as the invention of Suess, he subsequently claimed in the United*

States, by the claims in suit, as his own invention. Claims 5 and 35 must, therefore, be limited, and, when limited, they are not infringed by defendants.

It is a proposition which admits of no dispute that the construction which the Court should give to claims 5 and 35 of the patent in suit should not be *inconsistent* with the construction which the Court should give to the Berliner-Suess Canadian patent, because the language of claims 5 and 35 and of the Canadian patent is the language of Berliner. There can be no question about the proper interpretation and construction of the claims of the Canadian patent. Those claims broadly cover defendants' machines. It is impossible reasonably to hold that claims 5 and 35 in suit have exactly the same meaning and the same breadth and scope as the claims of the Canadian patent and likewise cover defendants' machines. Claim 11 of the Canadian patent for "a reproducing stylus mounted to have a free movement over the surface of the record tablet, substantially as described" "in an apparatus for reproducing sounds from a *rotating* record-tablet" (p. 167), is so broad that no claim could be broader. The other claims of the Canadian patent, while not so broad as claim 11, show that defendants' machines are constructed according to the invention of Suess and the evidence shows clearly that Suess and not Berliner invented such machines. The gramophone shown as a whole in Fig. 3 of the patent in suit is, unquestionably, as a whole, Suess' gramophone. From claim 11 of the Canadian patent we learn, on the authority of Berliner himself, that the free movement of the reproducing-stylus over the surface of the rotating record-tablet, substantially as described, was the invention of Suess, who, as he tells us in

the specification of the Canadian patent (p. 158, fol. 474), relied upon the "*control of the stylus by the walls of the record-groove for the movement of the stylus across the face of the disc, there being no positive feeding mechanism for thus moving the stylus.*"

In view of the claims of the Canadian patent and especially claim 11, it is not possible to hold that claims 5 and 35 in suit can cover a reproducing-stylus mounted to have a free movement over the surface of the rotating record-tablet by reason of the control of the stylus by the walls of the record-groove, and without any positive feeding mechanism for thus moving the stylus. Since Judge Townsend has found, and found correctly, that the Canadian patent "discloses and broadly claims the invention covered by the claims here in suit," as construed by the courts in the prior suit, it necessarily follows that, in the light of the new evidence of the Canadian patent, a new construction must be given to claims 5 and 35 here in suit. It is unreasonable to hold that what Berliner claimed in Canada as the invention of Suess, he subsequently claimed in the United States as his own invention. The court must, therefore, examine the specification of the patent in suit for the proper interpretation and construction of claims 5 and 35. As above shown, under Point One, Berliner states in the patent in suit that "*one feature*" of his invention relates to improvements in recording, while the "*other features*" of his invention have reference to the construction of the details of both the recorder and the reproducer of the gramophone. There are no other features to his invention, if his statement of his invention is to be taken as the guide. It is clear, therefore, that unless the improvements in the reproducer described and claimed in the patent in suit are to be

read into claims 5 and 35, those claims are invalid as claiming something which Judge Townsend has correctly found Berliner previously claimed to be the invention of Suess. But under such limited construction of claims 5 and 35, necessary for their validity, defendants do not infringe, since the reproducer or reproducing diaphragm and stylus of defendants' machines has none of the elements constituting the improvements in the reproducer described and claimed in the patent in suit.

(*i*). *Defendants use the reproducer of Suess' gramophone, shown in the Canadian patent, which reproducer has none of the features of the invention of the patent in suit. Defendants' machines embody the invention of Suess only.*

Before Berliner made his application on March 30, 1892, for the patent in suit, in order to cover, among other things, the improvements in the details of construction of his reproducer or reproducing diaphragm and stylus, other forms of reproducers were known and used and had been described by Berliner in previous letters patent granted to him in the United States and foreign countries. *An inspection of figure 1 of the Suess Canadian patent* (stipulated to be the same as Fig. 1, of U. S. patent 427,279) *shows that Suess did not use the reproducer or reproducing diaphragm and stylus of the patent in suit shown in figures 6 and 7 thereof.* Suess used another form of reproducer somewhat similar, for instance, to that shown in figure 2 of Berliner's prior expired, basic patent in the United States, No. 372,786. *The combination of such a reproducer with means for mounting the same so that the reproducing stylus might have a free movement over the surface of the rotating record tablet was,*

therefore, the invention of Suess and not the invention of Berliner. This fact is established by claim 11, and by other claims (2, 3, 5, 7, 12, 13) of the Suess Canadian patent. It appears from an inspection of complainants' exhibits of defendants' machines that they embody the said invention of Suess. In view of the Suess Canadian patent, all that claims 5 and 35 of the patent in suit can possibly be held to include is a reproducer vibrating and constructed as shown in figures 6 and 7 of the patent in suit. Obviously, the reproducers employed on the machines constituting complainants' exhibits of defendants' machines are totally unlike the reproducers of the patent in suit. *Defendants' reproducers are like the reproducer shown in the Suess Canadian patent which has none of the features constituting the improvements in the details of the construction of the reproducer of the patent in suit.*

> (*j*). *The same patent solicitor, acting for Berliner, made the application for the Berliner-Suess Canadian patent and the application for the patent in suit. It is not reasonable to hold that he first claimed the invention for Suess in Canada and then claimed the same invention for Berliner in the United States.*

It is also significant that Joseph Lyons, who acted as solicitor for Berliner in obtaining his United States patent, also acted as solicitor for Berliner in obtaining the Canadian patent as assignee of Suess. The Court now having before it Berliner's early United States patents upon which Suess' gramophone was an improvement and being able, therefore, to see that Suess made a radical departure from Berliner's early gramophone, and it appearing from the Suess Canadian patent that

Berliner himself asserted that the free movement of a reproducing stylus across the face of the rotating disc by reason of the pressure exerted by the walls of the record and without any feeding mechanism was broadly the invention of Suess, how is it possible to construe claims 5 and 35 so as to cover complainants' exhibits of defendant's machines which are like the Suess apparatus of the Canadian patent, including the reproducer or sound-box thereof, and which do not include any of the improvements of Berliner in the details of construction of his reproducer, which improvements are shown in figures 6 and 7 of the patent in suit.

That Suess was the inventor of machines such as complainants' exhibits of defendants' machines will still more clearly appear from a consideration of the defense of abandonment which constitutes the next defense interposed.

> (*k*). *Berliner's Canadian patent No. 55,079, identical with the patent in suit, was applied for and issued after the issue of the Berliner-Suess Canadian patent; hence, the Canadian patent office, as well as Berliner, considered that claims 5 and 35 did not cover the broad invention of the earlier Berliner-Suess Canadian patent, but were limited as above stated.*

Complainants, in rebuttal, put in evidence a copy of a Canadian patent, No. 55,079, issued to Berliner Feb. 24, 1897, on an application filed December 7, 1895 (T. case, pp. 330-333; L. & C. case, pp. 314-317). This Canadian patent is identical with the patent in suit (T. case, p. 333; L. & C. case, p. 317). It was applied for more than two years after the issue of the Berliner-Suess Canadian patent on Feb. 11, 1893. The fact that Berliner applied for and obtained Canadian patent

No. 55079 after the issue of No. 41,901 shows that neither Berliner nor the Canadian patent office thought that the invention of claims 5 and 35 in suit had been disclosed or claimed in the earlier patent No. 41,901 issued, Feb. 11, 1893, to Berliner, assignee of Suess. Since the patent in suit and Canadian patent No. 55,079 are identical and are both later than the Suess Canadian patent, how is it possible reasonably to construe claims 5 and 35 of the two identical Berliner patents to cover exactly what was described, claimed and patented in the earlier patent as the invention of Suess? Clearly claims 5 and 35 must be limited as above stated; to hold otherwise, is to nullify the clear intent and meaning of the Canadian patent office and of Berliner and to give to claims 5 and 35 a breadth and scope to which clearly they are not entitled.

POINT SEVEN.

Unless claims 5 and 35 of the patent in suit are limited by Berliner's improvements in the details of construction of his reproducer, abandonment of the invention by Berliner is clearly proved.

(a) The Berliner-Suess Canadian patent is incontrovertible proof of abandonment by Berliner.

The incontrovertible proof of abandonment is Berliner's application in Canada upon an assignment from Suess of the right to secure a patent broadly containing claims covering a reproducer and stylus mounted to have a free movement across the face of the rotating record tablet by reason of the pressure exerted by the walls of the

record and without any positive feeding mechanism. If Berliner prior to the date of the Canadian application had any claim or basis of claim to the invention, he clearly abandoned the invention and any claim that he might have had therefor when, as the assignee of Suess, he made his application in Canada for a patent containing the broadest possible claims therefor.

> (*b*) *Berliner, having elected to claim the invention in Canada as the invention of Suess, became estopped, under the authorities, from subsequently claiming the invention as his own.*

When Berliner made the Canadian application as the assignee of Suess, he was in a position where he could not keep silent and thereafter claim the invention, which, as he then asserted, belonged to Suess. "A party cannot occupy inconsistent positions; and where one has an election between several inconsistent courses of action, he will be confined to that which he first adopts. Any decisive act of the party done with a knowledge of his rights and of the fact, determines his election and works an estoppel"; Bigelow on Estoppel, p. 578 (ed. of 1872); Smith's Leading Cases, vol. 2, p. 735 (Am. ed. 1873).

In *Consolidated Fruit Jar Co.* v. *Wright*, 94 U. S., 92, the Supreme Court held that Mason at the time of his application for the patent there in question, had abandoned his invention to the public. The public was in possession of the invention in question from sources entirely independent of Mason before Mason applied for his patent, that is to say, Mason having made his invention and having communicated it to others, the public had thereby come into possession of the invention. Such action on Mason's part was held to constitute an abandonment. On the question of estoppel, the Supreme Court said (p. 96):—

"He who is silent when he should speak must be silent when he would speak if he cannot do so without a violation of law and injustice to others."

"The supineness of the patentee is unexplained and inexcusable. *A principal akin to equitable estoppel applies.*"

By reason of Berliner's applications in the United States and Canada as the assignee of Suess, and especially by reason of the broad claims of the Canadian patent, Berliner asserted, *and the assertion was in accordance with the truth*, that Suess was the inventor of gramophones such as complainants' exhibits of defendants' machines. This, it is confidently asserted is more than mere abandonment; it is a concession and admission that Berliner himself had no right to claim the invention.

(c). *Other evidence in the records, taken with the Berliner-Suess Canadian patent, further proves abandonment by Berliner. Berliner never claimed in any patent the special features shown in Figure 10 of patent No. 564,586, because they were not his invention.*

In view of the Canadian application by Berliner as the assignee of Suess, however, other facts appearing from the evidence before the court conclusively show that under the rules laid down by the Supreme Court above referred to, abandonment by Berliner is further proven.

When Berliner filed his application on November 7, 1887 in the United States for patent No. 564,586, he made figure 10 a part of the drawings thereof, and at p. 4, lines 90-127 he described the movement of the truck 55 and stylus 29 across the face of the disc 54. But he made no claim for the special features shown in figure 10 and described in the part of the specification referred to. If such was

his invention, why didn't he claim it? He stated that the modified form of reproducing apparatus shown in Fig. 10 embodied the main features of his invention which main feature he did claim. In his corresponding English, German and French patents he did not show said Fig. 10, but described and claimed all of said main features. Berliner never claimed Fig. 10 in any patent. Judge Hazel, in his opinion (p. 71, fol. 211), says;—

> "As already appears, the patent in suit was issued upon a later application than patent No. 564,586. Why the broad claims of the former were not made a part of the earlier application and specification does not appear."

Judge Hazel did not have before him, nor did the Circuit Court of Appeals have before it, the Suess Canadian patent. The Suess Canadian patent and the other evidence now before the court show clearly why Berliner made no specific claim in his application filed November 7, 1887, for the construction shown in figure 10 thereof. It was not his invention. Thus it appears that although Berliner illustrated and described the *construction of figure 10* referred to, *he never claimed it*, either in the application filed November 7, 1887 or in any other application and before filing his application for the patent in suit on March 30, 1892, he expressly admitted in the Canadian application filed May 5, 1891, (p. 169, fol. 507), that the broad invention and the invention limited by *all the details* which go to make up complainants' exhibits of defendant's machines belonged to Suess.

> *(d) In the Electrical World for November 12, 1887, more than four years before the application for the patent in suit was filed, Berliner published a description of the special features of the apparatus shown in Figure 10*

of patent No. 564,586. After that date Berliner never again described or referred to such impractical apparatus.

As a further evidence of Berliner's intention not to claim and to abandon all claim on his part, if he had any, to such invention, the article published in the Electrical World of November 12, 1887, offered in evidence, should next be considered. A copy of that article forms one of defendants' exhibits (pp. 243-244). That article Berliner testifies was prepared by him (p. 230, fol. 690). In that article Berliner described various means for making audible and enlarging the vibrations of the reproducing stylus (p. 244, bottom of 1st column). He then said (p. 244, top of 2nd column);—

> "This suggests the plan of mounting a reproducing diaphragm and stylus on a carriage moving on rails, and permitting the point of the stylus not only to vibrate, but also to push the carriage across the revolving disc, and thereby follow the volute of the sound record."

Berliner does not say that the suggestion belonged to him. The suggestion is the same as that shown in figure 10 of patent No. 564,586 above referred to. The publication in the Electrical World, however, was held by Judge Hazel to be too *indefinite*. In his opinion, with which the Circuit Court of Appeals agreed, Judge Hazel said (p. 72);—

> "The publication in the 'Electrical World' is not entitled to the probative weight claimed by the defendant. The rule is that the prior publication, in order to anticipate, must fully and clearly describe the invention so as to enable the skilled in the art to completely understand it and reproduce the apparatus without assistance from the patentee. Badische Ainlin & Soda Fabrik v. Kalls, 94 Fed., 163: Cohn v.

Corset Co., 93 U. S. 366. *The prior publication, based upon the article mentioned, is not within the rule stated.*"

Thus, in the application filed November 7, 1887, and in the Electrical World for November 12, 1887, Berliner described a carriage on wheels. The description in the Electrical World Judge Hazel held to be clearly *insufficient* to enable any one skilled in the art to construct an apparatus for the reproduction of sound. After the publication of the article in the Electrical World for November 12, 1887, no one ever heard a further suggestion for a reproducing apparatus consisting of a carriage on wheels.

> (c) *In his lecture before the Franklin Institute on May 16, 1888, Berliner acknowledged that the freely swinging, pivoted arm adapted, with the aid of the record-groove, to guide the reproducing stylus across the face of the record, was the very ingenious adaptation of Suess.*

When Berliner gave his lecture before the Franklin Institute on May 16, 1888 (pp. 245-273) he distinctly stated that Suess was the inventor of the only practical method of moving the reproducing stylus across the face of the disc by means of the walls of the record groove and without any feed mechanism.

In that lecture Berliner said (p. 270, fols. 808-809);

> "In the description of Nov. 12, 1887, I *advanced the idea* of mounting the sounder on a carriage and rails, and have the record-groove itself be the screw which was to guide the point of the stylus across the disk from periphery to center. This has been improved upon by Mr. Werner Suess, the gentleman here with me to-night and who is the mechanician of our little

shop in Washington. He suggested to mount the sounder on a pivot at some distance from the disk and then let the reproducing groove guide the sounder across the disc over an arc of flat amplitude. This happy idea *is embodied* in the present apparatus, and *is a very ingenious adaptation indeed.*"

(*f*) *In the Electrical World for August 18, 1888, nearly four years before the application for the patent in suit was filed, Berliner published a complete description of the perfected gramophone, with a perfect illustration thereof, embodying the invention of Suess, which invention included all the features of the defendants' machines and all the features shown and claimed in the Berliner-Suess Canadian patent. Still Berliner made no claim in any patent for such features.*

When next we hear from Berliner with reference to his gramophone, in the Electrical World for August 18, 1888, Berliner falsely puts himself before the public as the inventor of a gramophone including the Suess invention. A copy of the article on Berliner's gramophone appearing in the Electrical World for August 18, 1888, containing an illustration of what Berliner called his gramophone is one of defendants' exhibits (p. 274). *This article in the Electrical World for August 18, 1888, was not in evidence in the suit before Judge Hazel.* A comparison of the gramophone illustrated in the Electrical World for August 18, 1888, with the gramophone shown in the drawings, and covered by the *claims*, of the Suess Canadian application shows that the gramophone illustrated in the article in the Electrical World for August 18, 1888, is *Suess' gramophone.* Berliner's statement made on May 16, 1888, in the lecture before the Franklin Institute is conclusive proof of the fact,

and, of course, the fact that Berliner made the Canadian application as the assignee of Suess is the incontrovertible proof of the fact. Defendants' expert, Mr. Leeds, says (p. 119, fol. 356):—

> "The improved Berliner gramophone illustrated in the Electrical World of August 18, 1888, is obviously the gramophone of Werner Suess, and is substantially identical with the gramophone illustrated in the said Canadian patent and in the corresponding United States patent No. 427,279 to Berliner as the assignee of Suess."

The article in the Electrical World for August 18, 1888, published broadcast and was intended to publish broadcast knowledge of the gramophone there shown. This was nearly four years before Berliner made his application for the patent in suit. If Berliner had up to that time ever thought of making claims which would cover the form of the gramophone there shown embodying Suess' improvements, it is inconceivable that he would have had the article in the Electrical World for August 18, 1888, published and have waited four years nearly before making any claim thereto in any patent and before filing his application for the patent in suit.

> *(g) In Berliner-Suess United States patent No. 427,279, issued May 6, 1890, on an application filed August 6, 1889, nearly three years before the application for the patent in suit was filed, Berliner published a full description and illustration of the perfected gramophone shown in the Electrical World for August 18, 1888, and still made no claim that the features thereof here in controversy were his invention.*

Next, Berliner as the Assignee of Suess, applied, in the United States, on August 6, 1889, for Suess' improvements on the Berliner gramophone

of Berliner's early patent No. 372,786, of November 8, 1887, and No. 382,790, of May 15, 1888, and obtained patent No. 427,279, of May 6, 1890, which sets forth in figure 1 the Suess gramophone shown in the article in the Electrical World for August 18, 1888. Why the claims of the United States patent were limited by a counterweight and a system of links does not appear, but it is probable, as shown in defendants' affidavits (aff. Hicks, p. 89-90, fols. 267-268) that there was a prior application made by Berliner or Suess which was abandoned before the application for the patent which was issued, No. 427,279, was made. However, from patent No. 427,279 the gramophone such as complainants' exhibits of defendant's machines was again published to the world and still no claim for the invention thereof had been made by Berliner.

(b) On May 5, 1891, about a year before the application for the patent in suit was filed, Berliner, as the assignee of Suess, applied for the Berliner-Suess Canadian patent, disclosing and claiming therein as the invention of Suess, all the features of the gramophone here in controversy, as Judge Townsend has found. Still Berliner had made no claim in any patent that he was the inventor of such features.

On May 5, 1891, as appears from the certified copy of the petition of Berliner, Berliner filed an application for the Canadian patent for Suess' invention and made the broad claims therefor, all heretofore referred to. This was nearly four years subsequent to the making of his application on November 7, 1887, and about a year prior to his making the application for the patent in suit. The claims of the Canadian patent

are a climax to the other facts showing that the invention belonged to Suess and that if Berliner had any claim whatever to the invention, he had irrevocably abandoned it and had taken a position so inconsistent with any claim on his part for the invention that he could not thereafter be heard to claim it.

> *(i) When, on March 30, 1892, Berliner filed the application for the patent in suit, he had irrevocably abandoned any right which he may have had to claim as his invention the features of the gramophone here in controversy.*

When Berliner filed his application for the patent in suit on March 30, 1892, the world was in possession of a gramophone such as that shown in the Suess Canadian patent, and had been in possession thereof since August 18, 1888, at least, when Suess' machine was disclosed to the world in its perfected form in the article in the Electrical World of that date. It is respectfully submitted that in consideration of the facts and circumstances above referred to, no clearer case of abandonment could be made out.

> *(j) The new evidence in the suits at bar conclusively shows that the apparatus shown in Figure 10 of patent No. 564,586 was impracticable, and never went into use. If it was the invention of Berliner, he abandoned it.*

It has been stated above that Berliner never made any claim to the form of apparatus consisting of a carriage on wheels shown in figure 10 of the application filed November 7, 1887, for patent No. 564,586 and described in the Electrical World for November 12, 1887. Defendants' affidavits show that such apparatus never went into use (aff. Leeds, p. 121, fol. 362; aff. Moeller, p.

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123, fol. 367; aff. Ensign, p. 107, fol. 319, p. 110, fols. 330-332). Berliner himself states that he never had but one model of such an apparatus and that that model is lost (p. 239, fols. 716-717). As early as May 16, 1888, as Berliner says in his lecture before the Franklin Institute, he was using the Suess apparatus, and in the Electrical World for August 18, 1888, the Suess apparatus is shown, and in the Suess United States and Canadian patents it is the Suess apparatus that is shown, and in the patent in suit and in figure 3 thereof it is the Suess apparatus that is shown, and the only part of figure 3 of the patent in suit which Berliner could claim is the special form of the reproducer shown in detail in figures 6 and 7 of the patent in suit. The mere inspection of figure 10 of patent No. 564,586 shows to any one skilled in the art, that such an apparatus is impractical. Berliner knew that it was impractical. If it was his invention he abondoned it. He does not show it or refer to it in the patent in suit, and he never constructed or invented an apparatus that was practical, except those forms of reproducing apparatus which operate by mechanical feed screws. Not till the autumn of 1894, Mr. Berliner testified (p. 240, fol. 719) were talking machines sold, "in which a feed screw for the purpose of propelling the reproducing sound box across the record was dispensed with." This was subsequent to the date of Suess' invention and the machines sold were the Suess machines. Defendants' experts have in their affidavits conclusively shown that the apparatus of figure 10 of patent No. 564,586 applied for November 7, 1887, is impractical. To avoid unnecessary repetition, the court is respectfully referred on this point to the affidavits of Ensign (pp. 106-111, fols. 318-332), Leeds (pp. 119-121, fols. 357-362), Moeller (p. 122, fols. 365-367) and Irish (p. 288, fol. 862).

Among the many reasons given by defendants' experts showing that the apparatus of Fig. 10 of patent No. 564,586 is impractical, the following may be mentioned; the weight of a tube, 33, or of a horn would throw the stylus, 29, out of the record groove; the lateral movements of the stylus would cause the truck, 55, to move laterally and the diaphragm would not vibrate and the sound would not be reproduced; the revolving disc would cause a swaying of the truck and suspended sound-box and the stylus would be forced out of adjustment with the record-groove; the lack of vertical adjustment would either prevent the stylus from reaching down into the record-groove or the bottom of the record-groove would force the stylus up and the truck, 55, would be lifted from the rail, 56, and fall; the revolving disc always rises and falls, the rise or fall increasing toward the circumference, and, because of the lack of vertical adjustment, the stylus would leave the record groove when the disc falls and would be struck by the bottom of the record-groove when the disc rises, throwing the truck off the rail; record-grooves are of different depths and record tablets are of different thicknesses, by reason of which, and because of the lack of vertical adjustment, either the stylus would not reach into the record groove or would be struck by the bottom of the record groove; for this and other reasons enumerated by defendants' experts, the arrangement shown in Fig. 10 is a mere laboratory experiment and not a practical or operative device.

Since the hearing of the motions for preliminary injunction, complainants have examined their expert, Mr. Rudolph M. Hunter. As his testimony consists of opinion or argument, only, it may be permissible to quote his opinion with reference to the importance of the vertical adjustment of the

reproducing stylus which is secured in defendants' machines by Suess' freely swinging, pivoted arm;—

"XQ 104 In your answer to Q3 you say, speaking of the reproducing machine, that:

'The capacity for *vertical adjustment* of the arm enables the stylus to maintain its contact with the groove of the record tablet, notwithstanding considerable possible variation in the level of the tablet during its rotation.'

Do you consider this capacity of importance, and if so, kindly give your reasons.

A I consider it important because if the record tablet should buckle or the turn table should run untrue, as it frequently does, because of the warp nature of the castings, this capacity of *vertical adjustment* enables the stylus to maintain the same relative pressure upon the surface of the record tablet, and all times to maintain the positions properly in the groove. *If there were no vertical adjustment these defects in the record or the turn table would frequently cause the stylus to jump out of the groove; or on the other hand would force the record tablet tightly against the stylus and deface the groove.*

XQ 106 Do you regard the vertical adjustment, then, essential to the successful reproduction of sound and to a commercial machine of the gramophone type?

A I do not consider it essential, but in the ordinary manner of manufacture incident to this class I consider it an exceedingly desirable feature.

XQ 107 *It is essential to the successful reproduction of sound that the reproducing stylus do not leave the record groove?*

A *Yes.*

XQ 108 *And it is also essential for such purpose that the record groove be not forced against the reproducing stylus as described by you in your previous answer?*

A *Yes, as such action would destroy the rec-*

ord. But of course, sound would be reproduced even while the record was being destroyed.

XQ 109 *But not very successfully, would it?*

A *No.*

XQ 126 *And this lack of vertical adjustment you consider a serious disadvantage?*

A *I consider it a very serious disadvantage."*

(k). The freely swinging, pivoted arm with the horn and reproducing diaphragm and stylus mounted thereon are features of the Suess invention, and such features are embodied in defendants' machines. Such a horn could not possibly be used in the apparatus shown in Figure 10 of patent No. 546,586, and for other reasons set forth in the affidavits of defendants' experts, the apparatus shown in said Figure 10 is impracticable.

Suess in his Canadian and United States patents says that "With the view of intensifying the sound emitted by the reproducer, and more especially of directing the same to the listener or listeners, I use a funnel-shaped tube on the contracted end of which the reproducing diaphragm or stylus are mounted, while the open flaring end of the tube is directed to the listener or listeners." This tube or horn is included in the construction of complainants' exhibits of defendants' machines and such a horn could not possibly be used in the apparatus shown in said figure 10, and for the serious reasons stated in the affidavits the apparatus shown in said figure 10 is a laboratory experiment and impractical. The evidence upon this point is *new evidence*. There was no evidence upon the point in the prior suit.

We can easily understand, therefore, why Berliner abandoned completely all claim to any part of

the improvements shown in the Suess gramophone, and why in the Canadian patent he asserted that Suess was entitled to the broad claims therefor.

> *(l) An impracticable apparatus is not, under the authorities, an anticipation of a successful apparatus.*

In *Gordon* v. *Warder*, 150 U. S., 47, 50, the Supreme Court held that although the specification of a prior patent did contain a paragraph stating "that it might be advantageous in some case, to make the binder adjustable in respect to the cutting apparatus, no means were there provided or pointed out whereby such a desirable result could be obtained," and that, therfore, such prior patent could not be considered an anticipation of the patent involved in that suit. So in *Killeen* v. *Buffalo Furnace Co.*, 140 Fed. 33, 36, Judge Hazel said;—

> "The Killeen patent was not anticipated. The patent to Hartman, dated June 27, 1893, No. 500,386, upon which reliance is placed by defendant *has never been put into practical use.* According to the expert witness for complainant, *the Hartman apparatus is wholly impracticable.*"

Referring to Berliner's description in the Electrical World for Nov. 12, 1887, of the apparatus shown in Fig. 10 of the application filed five days before on November 7, 1887, Judge Hazel said;—

> "The publication in the 'Electrical World' is not entitled to the probative weight claimed by the defendant. The rule is that the prior publication, in order to anticipate, must fully and clearly describe the invention so as to enable the skilled in the art to completely understand it and reproduce the apparatus without assistance from the patentee. Badische Ainlin & Soda Fabrik v. Kalls, 94 Fed., 163; Cohn v.

Corset Co., 93 U. S. 366. *The prior publication, based upon the article mentioned, is not within the rule stated.*"

(*m*) *Abandonment of an invention may be evinced by the conduct of the inventor at any time before or after the patent is granted.*

"An abandonment of an invention to the public may be evinced by the conduct of the inventor *at any time*" before or after the patent is granted (Elizabeth v. Pavement Co., 97 U. S., 126, 134; Bell v. Daniels, 1 Bond, 212, 219; Ransom v. Mayor, 1 Fischer, 253, 273; Holmes Electric P. Co. v. Met. B. A. Co. 30 Fed. 254). *Abandonment once made cannot be recalled* (same cases.)

Abandonment is "a question of fact and may be established by the patentee's intention to abandon or by inferences consistent therewith (*Rifle and Cartridge Co.* v. *Arms Co.*, 118 U. S. 22; *Planing Machine Co.* v. *Keith*, 101 U. S. (479)". So said Judge Hazel in the prior suit (p. 72).

POINT EIGHT.

Berliner Patent in suit, No. 534,543, of February 19, 1895, expired February 11, 1899, before this suit was begun, with the expiration of the term of six years for which the prior Berliner-Suess Canadian Patent No. 41,901, of February 11, 1893, was granted.

(*a*). *Judge Townsend found that the Berliner-Suess Canadian patent "discloses and broadly claims the invention covered by the claims here in suit," and "that if this patent expired, as claimed in 1899, the patent in suit expired at the same time." Judge Townsend was in great doubt as to the effect upon the*

patent in suit, of the expiration of the Canadian patent in 1899, but resolved the doubt on this and other points in favor of complainants to permit an appeal to be taken.

Not only does Judge Townsend say in his opinion that this Canadian patent "discloses and broadly claims the invention covered by the claims here in suit" (T. case, p. 340, fol. 1019; L & C case, p. 324, fol. 971), but he also says (T. case, p. 341; L & C case, p. 325);—

> "But the Canadian patent in terms describes and claims the broad generic invention of Berliner covered by the claims here in suit, as will be seen from the following claims:
>
> '5. In an apparatus for reproducing sounds from a record tablet, the combination with a reproducer mechanism consisting of a sound conveying tube and a diaphragm and stylus mounted at one end of the tube; of a freely swinging supporting frame for the said reproducer mechanism, substantially as described.
>
> '7. In an apparatus for reproducing sounds from a record tablet, the combination with a reproducer mechanism consisting of a sound conveyer, and a diaphragm and stylus mounted at one end thereof; of a supporting frame for the said reproducer, loosely pivoted to swing freely both laterally and vertically, substantially as described.
>
> '11. In an apparatus for reproducing sounds from a rotating record-tablet, a reproducing stylus mounted to have a free movement over the surface of the record tablet, substantially as described.'
>
> "I think, therefore, that if this patent expired as claimed in 1899 the patent in suit expired at the same time, upon the authority of the decisions cited above."

As appears from Judge Townsend's opinion, he was, in view of the authorities hereinafter cited, in great doubt as to the effect upon the patent in suit of the expiration of the Canadian patent on February 11, 1899. In order to permit an appeal to be taken and a determination of the questions at the earliest possible moment by the Appellate Court, he said (T. case, pp. 342-343, fols. 1026, 1029; L & C case, pp. 326-327, fols. 978, 981);—

> "I have concluded to resolve the doubt raised on this point in favor of complainant."

Judge Townsend further said (T. case, p. 343; L & C case, p. 327);—

> "I . . . . have reached the conclusion that, *except as to the Sucss Canadian patent* No. 41,901, defendants have failed to introduce any new matter which would, in my judgment, have led the courts to reach a different conclusion if it had been before them in the original suit. But . . . . *if the expiration of the Sucss Canadian patent is a complete defense* . . . . yet I am constrained to grant the injunction in order to permit an appeal and a determination of the questions at the earliest possible moment."

(*b*). *Assuming, as Judge Townsend found, that the Berliner-Sucss Canadian patent "discloses and broadly claims the invention covered by the claims here in suit," the patent in suit expired with the expiration of the six year term for which the Canadian patent was granted, on Feb. 11, 1899.*

Unquestionably the Canadian patent covers "in an apparatus for reproducing sounds from a rotating record tablet, a reproducing stylus mounted to have a free movement over the surface of the record tablet, substantially as described" (see p. 167, claim 11). For the movement of the stylus over

the surface of the rotating record tablet as described, Suess states that he relies upon the "control of the stylus by the walls of the record groove for the movement of the stylus across the face of the disc, there being no positive feeding mechanism for thus moving the stylus" (p. 158, fol. 474). Other claims and other parts of the specification of the Canadian patent likewise show that Suess was the inventor of machines such as complainants' exhibits of defendants' machines, and, therefore, claims 5 and 35 of the patent in suit must be limited by the special form of reproducer illustrated in figures 6 and 7 of the patent in suit, which reproducer has never been used by either defendant (Aff. Irish, p. 287, fols. 861-862; aff. Leeds, p. 296, fol. 886). Should the Court for any reason be of opinion that claims 5 and 35 of the patent in suit are not limited by the special form of reproducer shown in figures 6 and 7, and that notwithstanding the Canadian patent claims 5 and 35 are broad enough to cover complainants' exhibits of defendants' machines, in such case it necessarily follows that claims 5 and 35 are for the same invention as that patented by the Canadian patent, since the gramophone of the Canadian patent is the gramophone embodied in complainants' exhibits of defendants' machines. Assuming then that claims 5 and 35 protect the invention of the Canadian patent; since the Canadian patent was a prior patent to Berliner, it follows that the patent in suit expired on February 11, 1899, with the expiration of the term of six years for which the Canadian patent was granted.

(*c*). *The invention of the Berliner-Suess Canadian patent was, under the Statute and decided cases, patented and caused to be patented by Berliner, the patentee of the patent in suit.*

In order that a United States patent shall, under §4887, be limited by a prior foreign patent, it is not necessary that the foreign patent be taken out by the inventor and patentee of the United States patent, but it is sufficient if he causes the foreign patent for the same invention to be issued.

The language of §4887 is very broad. It reads as follows:—

> "No person shall be debarred from receiving a patent for his invention or discovery, nor shall any patent be declared invalid, *by reason of its having been first patented or caused to be patented* in a foreign country, unless the same has introduced into public use in the United States for more than two years prior to the application. But every patent granted for *an invention which has been previously patented* in a foreign country shall be so limited as to expire at the same time with the foreign patent, or, if there be more than one, at the same time with the one having the shortest term, and in no case shall it be in force more than seventeen years."

All that is necessary is that the invention be first patented or caused to be patented in a foreign country by the patentee or inventor of the United States patent. In *Hobbs* v. *Beach*, 180 U. S., 383, 397, the Supreme Court stated that §4887 "evidently means that the patentee shall not be debarred from *his* patent by reason of *his* having first patented or *caused his* invention to be patented in a foreign country." In *Wilcox Co.* v. *Industrial Co.*, 110 Fed. 210, 214, Judge Gray said "We do not think that §4887 of the Revised Statutes applies to a patent taken out by another than the patentee of the patent whose term is sought to be shortened and *without his acquiescence or consent*."

Berliner as assignee of Suess took out the Cana-

dian patent, and if claims 5 and 35 of the patent in suit are broad enough to cover the invention of the Canadian patent, since the Canadian patent is a prior foreign patent to Berliner, the patent in suit expired with the Canadian patent on February 11, 1899.

> (*d*) *Under the patent act of Canada, a Canadian patent "expires," within the meaning of §4887 of the Revised Statutes, at the expiration of the term for which the fee to the Government has been paid, unless a further fee for a "further term" is paid. The patent does not lapse and is not forfeited, but its term expires.*

The material parts of the patent Act of Canada is one of defendants' exhibits (pp. 181-188, fols. 542-562).

According to § 22 of the Patent Act of Canada (p. 184) and of § 39 thereof (p. 187), the applicant has the option of paying the fee for eighteen, twelve or six years. The term of the Canadian patent cannot exceed eighteen years (§ 22 p. 184). In other words, eighteen years is the *limit* of the duration of *any term* of a Canadian patent, but at the option of the applicant the patent may be issued for a shorter term of six years or of twelve years. Sub-division 2 of § 22 of the Patent Act of Canada provides (p. 185);—

> "2. If a partial fee only is paid, the proportion of the fee shall be *stated in the patent* and the patent shall, *notwithstanding anything therein or in this act contained*, cease at the end of the *term* for which the partial fee has been paid, unless, before the *expiration* of the said *term*, the holder of the patent pays the fee required for the *further term* of six or twelve years."

§ 20 of the same act (p. 550) provides;—

> "20. Every patent granted under this act * * * shall grant to the patentee and his legal representatives, for the *term therein mentioned*, from the granting of the same, the exclusive right" etc.

In accordance with these provisions of the Canadian act, the grant of the Canadian patent contains the following provision (p. 156, fol. 467);—

> "The partial fee required for the *term* of six years having been paid to the Commissioner of Patents, this Patent shall cease at the end of six years from date, unless at, or before the *expiration* of the said *term*, the holder thereof pay the fee required for the *further term* or *terms* as provided by law."

The certificate of the Canadian Patent Office states (p. 169, fol. 507);—

> "that the said patent *expired* upon the 11th day of February, 1899, by reason of the non-payment of the fee for the second *term* of six years."

The grant (p. 156) of the Berliner-Suess Canadian patent "for the period of eighteen years from the date of these presents . . . . provided, that *the grant hereby made is subject to the conditions contained in the acts aforesaid*," means, as stated in the act, that "the patent shall, *notwithstanding anything therein or in this act contained*, cease at the end of the *term* for which the partial fee has been paid, unless before the *expiration* of the said *term*, the holder of the patent pays the fee required for the *further term* of six or twelve years." Clearly the Canadian patent *expired*, under these provisions at the "*expiration of the said term*", *six years*, for which alone it was granted at the *time of its issue*. Not having been prolonged, renewed or extended, it never had any other term.

Eighteen years was the limit of time to which it might have been prolonged, but no *further term*, beyond the original term of six years, having been obtained, the patent had but one term of six years and "*expired*" at the "*expiration of the said term.*"

Thus the provisions of the Canadian Patent Act clearly show that a patent may be issued for the term of six years, for the term of twelve years, or for the term of eighteen years, and that in case of a patent issued for the term of six years, the patent will expire by the "*expiration of the said term,*" unless a further fee is paid for a "*further term.*" There is *no obligation* to pay the further fee for the further term and there is *no forfeiture or lapse* of the patent if the further fee for the further term is not paid. If the further fee for the further term is not paid, the granted term "*expires*" and the patent, in the language of the Act, will "cease at the end of the *term* for which the partial fee has been paid, unless before the *expiration* of the said *term* the holder of the patent pays the fee required for the further term of six or twelve years." The certificate above quoted says "the said patent *expired.*" For the lapsing and forfeiture of patents through the non-performance of a condition subsequent or the like, the Canadian Patent Act makes special provision under the separate head of "Forfeiture of Patents" (§ 37, pp. 186-187).

(*c*) *Judge Townsend erred in holding that the legal term of the Canadian patent did not expire but lapsed or became forfeited in 1899. The Bonsack case, cited by Judge Townsend in support of his ruling is directly opposed thereto, and the Welsbach case, cited by him in support of his ruling, in no way involved the question at issue.*

Judge Townsend correctly stated the rule of law

when he said (T. case, p. 342; L & C case, p. 326);—

> "The rule in such cases as I understand it is that the duration of the United States patent is limited by the duration of the legal term of the foreign patent and that it is not limited by any *lapse* or *forfeiture* of any portion of said term by means of any *condition subsequent*.
>
> "*Pohl* vs. *Brewing Co.*, 134 U. S., 386.
>
> "In *Bate Refrig. Co.* vs. *Sulzberger*, 157 U. S., 1, the Supreme Court says as follows:
>
> "'But the American patent will be granted upon the condition that, if you obtain the foreign patent first, your invention shall be free to the American people whenever, by reason of the *expiration of the foreign patent*, it becomes free to the people abroad.'"

He erred, however, in considering that the legal term of the Canadian patent did not *expire* but *lapsed* or became *forfeited*. Judge Townsend based his ruling upon the decision of Judge Simonton in *Bonsack Machine Co.* v. *Smith*, 70 Fed., 383, and of the Circuit Court of Appeals for the Second Circuit in *Welsbach Light Co.* v. *Apollo Co.*, 96 Fed. 332. It is not surprising that Judge Townsend reached his conclusion as he says, "*with some hesitation* (T. case, p. 342; L & C case, p. 326), because his conclusion is directly contrary to Judge Simonton's decision in the *Bonsack* case, and the question decided in the *Welsbach* case was entirely different from the question here involved, as will be seen from the following statement of the decisions in those two cases.

Before taking up the decisions in the two cases mentioned, attention should be directed to the word "*permitted*" used by the Supreme Court in *Bate Refrig. Co.* v. *Sulzberger*, 157 U. S. 1, 36, just before the part quoted, as above stated, by Judge Townsend. The Court said;—

> "the American patent expired with the for-

eign patent, and thereby the American public became entitled to use the invention from the time the foreign public were *permitted* to use it."

As pointed out by Judge Simonton, in the *Bonsack* case as will presently be shown under subdivision (*f*), an inventor "*permits*" the foreign public to use his invention, when by his voluntary act he does not avail himself of the privilege of prolonging or renewing the term of the foreign patent, but permits the patent to expire through lapse of time at the end of the original term thereof. In the case of a *lapse* or *forfeiture* through *breach of a condition* subsequent, the inventor is *deprived* of his foreign patent and does not, by his voluntary act, *permit* the foreign public to use the invention.

> (*f*) *In the Bonsack case it was squarely held that a Canadian patent for which the fee for a five year term only had been paid and which was not prolonged by payment of a further fee for a further term before the expiration of the original five year term expired with the expiration of the original five year term and did not lapse or become forfeited.*

In *Bonsack Machine Co.* v. *Smith*, 70 Fed. 383, Judge Simonton held that a United States patent expired with the expiration of the five year term of a Canadian patent. At that time, under the Canadian Patent Act, the duration of a Canadian patent could not exceed fifteen years, but the applicant at his option could obtain a patent for the term of five years, or for the term of ten years, or for the term of fifteen years by paying the fee required, and he could, before the expiration of the five year or the ten year term, obtain an extension for another period or term of five years by paying a further fee. That was under § 17 of the Canadian Patent Act which is quoted by Judge Blatchford in *Bate*

v. *Hammond*, 129 U. S., 151,165. Although the duration of the terms was changed at the time the Canadian patent to Berliner was issued from five, ten and fifteen years to six, twelve and eighteen years, nevertheless, the substance of the provisions is identical under each act, and it is clear that in each case if at the end of the first term a further fee is not paid and a further term secured, the patent ceases through the *expiration of the term* and not by forfeiture or lapsing through the non-performance of a condition subsequent. Judge Simonton, in *Bonsack Machine Co.* v. *Smith*, *supra*, held that under the decision of the Supreme Court in *Pohl* v. *Anchor Brewing Co.*, 134 U. S., 381, the word "expire" means "cease to exist because of the termination of the duration of the original grant, and not to mean cease or determine by reason of some penalty or forfeiture for the non-performance of some condition subsequent." Referring to the cases cited by the Supreme Court to show that the words "expiration of term" mean "expiration by lapse of time" (134, U. S. 381), Judge Simonton in the *Bonsack* case also said that "in those cases it was held that the words 'expiration of term' do not mean expiration of term through a forfeiture by breach of a condition, but mean expiration by lapse of time." Accordingly Judge Simonton held that the Canadian patent having been granted for five years and having expired at the end of the five years, and not having been renewed for a further time had expired, not by forfeiture, but by lapse of time, and that in consequence, the United States patent expired with the expiration of the five year term of the prior Canadian patent. There is no case holding the contrary, and Judge Simonton's decision is the last reported decision upon the point so far as defendants' coun-

sel has been able to ascertain. It is impossible to distinguish between the Canadian Act as it existed when Judge Simonton rendered his decision and the Canadian Act as it existed when the patent in suit and the Canadian patent were issued. Although there is a change in the lengths of the terms and a slight change in phrascology, the substance is exactly the same, and in each case at the end of each term there is an expiration of the patent by reason of the expiration of the term and not a forfeiture which is provided for upon different grounds under separate provisions of the acts (pp. 186-187).

In pages 392-395, Judge Simonton exhaustively considers and discusses; first, what is the *term* of a Canadian patent; second, what is the meaning of the word "*expire*" in § 4887 of the Revised Statutes; and, third, when does a Canadian patent, under the Patent Act of Canada, *lapse* or become *forfeited*. Judge Simonton's conclusion was; first, that although a Canadian patent could be *prolonged* for successive terms of five years each, not to exceed in the aggregate fifteen years, yet "*each duration of five years is a term independent*. This clearly appears from the language of the act of 1872, and that of the act of 1883 in *pari materia*" (p. 393); second, that the word, "*expire*", as used in § 4887 of the Revised Statutes, means expiration of the term by *lapse of time* and not through a *breach of a condition*, resulting in a *lapse* or *forfeiture* (p. 392), and he pointed out that in *Bate* v. *Hammond*, 129 U. S., 151, the Canadian patent there in question did not "expire" at the end of the original five year term because the patentee, having exercised "the privilege of renewing and extending the term", the original term of five years was converted into a continuous term of ten years and then of fifteen years,

and the patent could not be said to "expire" until the expiration of the fifteen years (p. 394); and, third, that where, by the law of Canada, a patent is granted for five years and the privilege of renewing and extending the term is not exercised and the five year term expires, such an expiration of the five year term is not, under the law of Canada, a breach of a condition resulting in a lapse or forfeiture, but *an expiration of the granted term*, because the conditions of forfeiture are not incurred as they would have been if a patentee had failed to put his invention into operation within two years or had introduced a patented machine from abroad within twelve months, and because the patentee had never put himself under any obligation by contract or otherwise to pay the additional sum of money or fee as a condition precedent to the exercise, entirely of his own volition and option, of the privilege of renewing and extending the five year term (pp. 394-395). So Judge Simonton concluded that the patentee of the Canadian patent had held his patent five years *"until the term fixed by law had expired by its own limitation"*; that in the *Pohl* case, and this marks the distinction, the prior German patent was forfeited because the patentee failed to fulfill a positive *duty* enjoined upon him by statute or by contract, to wit, the *obligation* to pay the taxes; and that the language of the Supreme Court in *Bate* v. *Sulzberger;*

> "If you have a foreign patent your patent shall cease to protect you, when, by reason of the expiration of the foreign patent your invention becomes free to people abroad"—

applied, since the patentee of the Canadian patent in question—

> "Knowing the condition on which he held his United States patents, he, of his own volition,

allowed the new term to *expire* in 1891, not to *lapse* nor become *forfeited*. By his own act he made his invention free to people abroad. It became free thereupon to the people of this country. He lost the protection of Section 4887."

It is difficult to understand how Judge Townsend could have reached his conclusions in the suits at bar, even "with some hesitation" upon Judge Simonton's decision in the *Bonsack* case. If the decision in the *Bonsack* case was correct, and it will be shown that it accords with all decisions upon the point, the Berliner-Suess Canadian patent *expired* and did *not lapse* or become *forfeited* in 1899, and the patent in suit expired therewith.

> (*g*) *In the Welsbach case the only question involved was whether, where a prior French patent had lapsed before the grant of the home patent, but after the filing of the application therefor, the home patent was invalid upon the ground of abandonment or other ground arising out of those facts only. The question whether the prior French patent had lapsed or had expired was not involved, for, concededly, it had lapsed.*

In *Welsbash Light Co.* v. *Apollo Co.*, 96 Fed., 332, in which defendants' counsel in the suits at bar filed a brief upon the question involved on behalf of the *Rex Incandescent Light Company*, the question, and the *only* question, was whether, where a prior French patent had lapsed *before* the *grant* of the home patent, but *after* the filing of the *application* therefor, the home patent was invalid under the authority of *Huber* v. *Nelson Mfg. Co.*, 148 U. S., 270. An examination of the briefs of Messrs. Choate, Bennett and Wetmore, filed in the Circuit Court of Appeals, shows that the argument

proceeded principally upon the question whether the decision of the Supreme Court in the *Huber* case rested upon *abandonment* or whether that decision was broad enough to make invalid any home patent granted after the lapse of a prior foreign patent, although the application for the home patent had been filed before the prior foreign patent had lapsed. The Circuit Court of Appeals held that the *Huber* case rested upon abandonment and that the home patent having been *applied for* before the lapse of the prior foreign patent, abandonment was not shown.

Clearly in the Welsbach case, upon which Judge Townsend also relied, *the question here presented was not involved.* The question here is whether the Canadian patent *expired* in 1899, which was four years after the grant of the patent in suit, or whether the Canadian patent *lapsed* or became *forfeited* at that date. If there was a mere lapse or forfeiture then the decision of the Supreme Court in *Pohl* v. *Anchor Brewing Co.*, 134 U. S., 386, settles the question; but if there was, *by lapse of time, an expiration of the term* for which the Canadian patent was granted, and Judge Simonton so held in the *Bonsack* case, then the decision of the Supreme Court in *Bate* v. *Sulzberger*, 157 U. S. 1, applies and the patent in suit expired with the expiration of the term of the Canadian patent in 1899. It is clear, therefore, that Judge Townsend overlooked the question here involved. His examination of the authorities was brief, he says, and this, undoubtedly, accounts for his incorrect statement of the points decided in the *Bonsack* and *Apollo* cases above referred to.

(*h*) *The distinction under § 4887 of the Revised Statutes, between patents granted for a short term and not prolonged before the ex-*

piration of the short term for a further term by reason of which the short term and the patent expire by lapse of time, and patents granted for a fixed term subject to forfeiture or lapsing as a penalty upon breach of a condition subsequent during the term for which the patent was granted is well settled by authority in the patent law of this country. Judge Townsend erred in not recognizing this distinction and in not holding under the doctrine of stare decisis that the Canadian patent expired in 1899 with the expiration of the six year term for which it was granted, and which was the only term it ever had.

It is respectfully submitted that it is impossible upon the facts before the court, in view of the express provisions of the Canadian statute, to hold that the Canadian patent lapsed or became forfeited in 1899 and did not expire by lapse of time, within the meaning of § 4887 of the Revised Statutes. As will be seen from the cases hereinafter cited, the courts have uniformly held, and as Judge Simonton said, this marks the *distinction*, that *where a prior foreign patent is granted for a stated number of years upon the payment of a fee fixed for a term of that number of years, with a right to renew or prolong the term for a further number of years and up to a number of years beyond which the patent cannot be prolonged, in such cases, if the patentee does not exercise his right to renew or prolong the patent for a further term or a further number of years, the patent expires by lapse of time and carries with it a United States patent subsequently granted for the same invention. Where, however, a prior foreign patent is granted for a fixed term stated in the original grant and without provision for renewal or pro-*

longation of the term, and the patentee, by reason of the contract with the government under which the patent is granted becomes obligated to perform certain conditions such as the payment of an annual tax or to work his invention within a fixed period after the grant of the patent, or is prohibited from introducing the patented article into the country granting the foreign patent, in such case, if the patentee does not pay the annual tax which he is under obligation to pay or otherwise commits a breach of the conditions under which the patent was granted, the patent does not expire by lapse of time, but lapses and becomes forfeited by reason of the breach of condition. In *Pohl* v. *Anchor Brewing Co., supra*, the prior foreign patents were French and German patents granted each for the term of fifteen years upon condition that the patentee should pay the annual taxes required. Because the patentee failed to pay the annual taxes, the French and German patents lapsed and became forfeited because of the breach of condition; and, since there was no expiration by lapse of time of the terms for which the patents were granted, the Supreme Court held that § 4887 of the Revised Statutes did not apply and that the home patent did not expire at the time when the French or German patent lapsed and became forfeited, the reason being that there was no expiration of the term by lapse of time.

In the suits at bar, however, the Canadian patent clearly expired by reason of expiration through lapse of time. The term of the Canadian patent, the only term which the Canadian patent ever had, expired by lapse of time. This, as the Court will see from the authorities hereinafter cited, brings the case within the statute.

In *Western Electric Co.* v. *Citizens' Tel Co.*, 106 Fed. 215, quoted *supra* under Point Two, p. 60,

Judge Severens held in accordance with the decision of the Supreme Court in *Commercial Mfg. Co. v. Fairbank Co., infra*, that a United States patent expired with the expiration of a three year term of a prior Italian patent. According to the law of Italy, the duration of a patent could not in any case exceed fifteen years (Pat. Laws of the World, Carpmael, 1885, p. 288, Art. 11); and "patents granted for less than fifteen years may be *prolonged* for one or more years; the duration, however, of the prolongation added to the duration of the original patent shall in no case exceed fifteen years" (Carpmael, p. 289, art. 12). It is believed that Judge Severen's decision is the last decision involving the principle relied upon.

In *Electric Accumulator Co.* v. *Brush Electric Co.*, 52 Fed. 130, 139, quoted *supra* under Point Two, p. 63, the Circuit Court of Appeals for the Second Circuit assumed under the authority of *Commercial Mfg. Co. v. Fairbank Co., infra*, as Judge Severens held, that, where an Italian patent was previously granted "for the term of three years from September 30, 1882 and *was not prolonged*" (p. 139) and was in force when U. S. patent No. 337,299 was issued (p. 139), the United States patent would have expired with the expiration of the three year term of the Italian patent, if the Italian patent had been granted for "any one of the inventions" for which the home patent was granted (p. 139).

Judge Coxe, in the same case in the court below, stated the question involved as follows (47 Fed. 48, 52);—

> "Did patents Nos. 337,299 and 266,090 expire with the Italian patent? The Italian patent was * * * issued for a term of *three years* from September 30, 1882. It ex-

pired September 30, 1885, never having been *prolonged, renewed or extended.*"

Upon these facts, the only question considered open by Judge Coxe and the Circuit Court of Appeals was whether the home patents and the Italian patent were for the same invention. The question of identity of invention was, therefore, exhaustively examined by both courts, and it appearing, as the Circuit Court of Appeals said, that "the Italian patent is not the same in its essential particulars with *any one* of the inventions which are claimed in 337,299, and the home 'patent would not be infringed by a structure made in accordance with the provisions of the foreign patent' " (52 Fed. 139), it was held that the home patent did not, *for this reason only*, expire with the Italian patent.

In *Edison Co. v. United Co.*, 52 Fed. 300, the Circuit Court of Appeals for the Second Circuit, held (head note 5) that "a prior Canadian patent, issued for 5 years, and extended for the further period of 10 years, should be regarded as having a continuous term for the entire period, and as not limiting the United States patent to any shorter term", following *Bate* v. *Hammond*, 129 U. S. 225, where the Canadian patent had been kept alive for the full period of 15 years and where as the Supreme Court said later in the *Pohl* case (134 U. S. 381,385) the court limited itself to the precise question involved in view of the fact that the Canadian patent did *not* expire, and that its term was kept continuous by renewals, until the end of the 15 years. Nevertheless the court *again assumed* (52 Fed. 312), that had the renewal of the Canadian patent become impossible at the end of the original term of five years, as contended by defendants, by reason of the lapse of a certain Swedish patent, the United States patent

would have expired with the expiration of the 5 year term of the Canadian patent. It cannot reasonably be contended that the Court proceeded on any other theory or principle, since if such was not the theory of the court, it would not have exhaustively examined, in order to decide, the question whether the Canadian patent was affected in duration by the Swedish patent which did not exist when the Canadian patent was granted but was issued after the grant of the Canadian patent. The court expressly said (p. 312) that "*the soundness of the defendant's contention depends on the meaning under the Canadian law, of the phrase 'where a foreign patent exists,' as used in this (the Canadian) statute.*"

As above pointed out under Point Two, p. 59, in the case of *Commercial Mfg. Co. v. Fairbank Co.*, 135 U. S. 156, which came before the Supreme Court shortly after the decision in *Bate* v. *Hammond*, 129 U. S., 151, and immediately after the decision in *Pohl v. Anchor Brewing Co.*, 134 U. S. 386, and in which Judge Blatchford wrote the opinion as he did in the *Bate* and the *Pohl* cases, and could not by any possibility have overlooked the point necessarily involved, it was held that a United States patent expired with two prior Austrian and Bavarian patents originally granted for short terms of one and two years, and then "*prolonged*" and then permitted at the end of three years to expire with the expiration of the terms for which they had been "*renewed*" or "*prolonged*," but long before the expiration of the time for which the patents could have been prolonged. "The conclusion of the Circuit Court," with which the Supreme agreed, "was that the plaintiff's patent *expired* by the *expiration* of the Bavarian and Austrian patents."

Under Point Two, sub-division (*i*), p. 59, in con-

sidering the case of *Commercial Mfg. Co.* v. *Fairbank Co.*, reference was made to the record on appeal in that case (pp. 484-486 and 487) where these facts appear. According to the Austrian law in force at the time (See Carpmael, *Patent Laws of the World*, London, 1885, p. 23), it was provided, by § 25, that "the longest duration of privileges is fixed at fifteen years," and, by § 27, that "every patentee whose privilege has been granted for a shorter period than the longest (§ 9c) may claim its *prolongation* for one or more years within the fixed longest period," and by § 9c, "that number (of years) cannot exceed fifteen, except by a special grant of the Emperor."

Gramme Electric Co. v. *Arnoux*, 17 Fed. 838, decided by Judge Blatchford, is to the same effect. At p. 840, Judge Blatchford, in holding that a home patent expired with a prior Austrian patent at the end of the tenth year of prolongation of the latter, said that:

> "*A capacity of being prolonged so as to have a duration of fifteen years is not equivalent to having a term of fifteen years when the patent is granted for one year and then is prolonged so as to expire at the end of ten years.*"

Judge Blatchford's opinion in the *Gramme* case was cited with approval in *Bate* v. *Sulzberger*, 157 U. S. 1, 31, upon the point of the meaning of "previously patented." In *Pohl* v. *Anchor Brewing Co.*, 134 U. S. 381, 385, the court said that the question involved in that case was not the same as that decided in *Bate* v. *Hammond* and was not controlled by the decision in that case. In *Bate* v. *Hammond* the Canadian patent had been kept alive and, therefore, it did not expire. Where, however, the term is permitted to expire by *lapse of time*, following *Oakley* v. *Schoomaker*, 15 Wend. 226; *Beach* v. *Nixon*, 9 N. Y., 35 and *Farnum* v. *Platt*, 8 Pick. 339, and is

not forfeited by breach of a condition subsequent, the Supreme Court said in the *Pohl* case and squarely held in the *Commercial Mfg. Co.* case, and the lower Courts following those decisions have held, as above shown, that the United States patent expires with the expiration of the term for which the prior foreign patent was actually granted and extended, although when the foreign patent expired, the patent might have been extended under the foreign law for a further term. Although in the earlier decisions, among them one by Judge Townsend, there was considerable conflict and confusion upon this question, there is no authority contrary to Judge Simonton's decision in *Bonsack Machine Co. v. Smith*, *supra*, and the recent decisions of the courts above quoted, show that the rule is now uniformly applied as above stated, in accordance with the meaning above explained of the expression "expiration of term" by "lapse of time." The *term* of a lease *expires*, by lapse of time and limitation, if the privilege of renewal is not exercised. In such case, it would be absurd to say that there was a forfeiture by breach of a condition.

The *distinction* between patents, such as French and German patents, which *lapse* because of the breach of a condition subsequent, in the non-payment of annual taxes, according to the *contract* under which the patent is granted imposing an obligation upon the patentee, and patents which *expire* by lapse of time, such as Austrian, Bavarian, Italian and Canadian patents, because granted for a limited period and not prolonged, renewed or extended by the patentee *at his option*, in the exercise not of a duty but of a privilege, is clear and *well settled* in the patent law of this country. Judge Townsend erred in holding that the patent in suit did not expire in 1899 with the Canadian patent because he overlooked this well settled distinction upon which defendants, under

the rule of *stare decisis*, had a right to rely in the investment of their capital and in the conduct of their business, without being subjected to the *disastrous results* of some new interpretation of the law, set forth with great "*doubt*" and "*hesitation*" in order to grant an injunction destructive of their property and of their rights to permit an appeal to be taken.

POINT NINE.

The Berliner-Suess Canadian Patent No. 41,901, of February 11, 1893, could not, under the Canadian Patent Act, be prolonged beyond May 6, 1905, because the same invention having been patented by Suess on May 6, 1890, by French Patent No. 205,491, "under any circumstances, if a foreign patent exists, the Canadian patent shall expire at the earliest date on which any foreign patent for the same invention expires." Therefore, even if the Canadian patent did not expire in 1899, it did expire on May 6, 1905, with the expiration of the term of the prior French patent and with it the patent in suit expired, before the making of the motions for preliminary injunction.

Letters-Patent of France to Werner Suess, No. 205,491, of May 6, 1890, are enumerated in the answers (p. 31, fol. 91). "Said Suess French patent is identical in all respects, including the specification, drawings and claims, with U. S. letters-patent to Suess, No. 427,279" (aff. Hicks, p. 80, fol.

238). *This is not denied.* The specification and claims of the French patent are a literal transaction of the specification and claims of the U. S. patent. The drawing are identical. The Suess French patent bears the same date, May 6, 1890, as the date of the Suess U. S. patent, No. 427,279 (p. 233, fol. 698). The Suess French patent was in evidence in the prior suit (p. 79, fol. 237), but the Berliner-Suess Canadian patent was not in evidence in the prior suit (p. 81, fol. 243). According to the Law of France, the longest duration of a French patent was fifteen years (p. 176, fol. 527), and the term of the patent runs from the day of the deposit of the application, which is the day of its date (p. 178, fol. 533).

In the prior suit it was stipulated, as shown by the evidence in the suits at bar (p. 238, fol. 713; p. 80, fol. 238), as follows;—

> "It is hereby stipulated and agreed by counsel for *complainant* that Suess' French patent No. 205,491 appears to be the same as U. S. patent No. 534,543, and may be treated as such subject to correction."

The same stipulation is found at page 273 of the record on appeal in the prior suit. Under that stipulation the French patent was not printed in the record on appeal in the prior suit, because it was to be treated as being the same as U. S. patent 534,543, the patent here and there in suit. Among defendants' exhibits in the prior suit, there are enumerated, "certified copy, drawings and specification Suess French patent No. 205,491 (not printed). NOTE—see stipulation, p. 273)" (Index, p. II). A certified copy of the drawings and specification of Suess' French patent No. 205,491 was offered in evidence in the prior suit and marked "Defendants' Exhibit, Suess French Patent" (record on appeal, p. 244).

As it appears from the evidence in the suits at bar (p. 80, fol. 238), so it appears from the evidence in the prior suit that Suess' U. S. patent No. 427,279 and Suess' French patent No. 205,491, "are identical in substance, and it will, therefore, only be necessary to compare the subject matter of the claims mentioned (5 and 35 of the patent in suit) with one of these patents, for example, the U. S. patent" (record on appeal, p. 256). As in the suits at bar (p. 233, fol. 698), it also appears from the record on appeal in the prior suit, that the date of the French patent, May 6, 1890, is the same as the date of the Suess U. S. patent No. 427,279 (record on appeal, p. 268). An examination of the original exhibits filed in the prior suit in the office of the clerk of the Circuit Court for the Southern District of New York, shows that the certified copy of the Suess French patent in evidence in that suit supports the stipulation and evidence above referred to. The introductory paragraph, translated, reads as follows;—

> "Descriptive memorandum annexed to patent of invention for fifteen years, taken May 6, 1890 by Mr. Werner Suess represented by the firm Marillier and Robelet, Paris, 42 Boulevard Bonne-Nouvelle, which has been delivered by decree of the Ministry of Commerce, of Industry and of the Colonies under date of September 1, 1890, for 'Improvements relating to Gramophones.' Patent No. 205,491."

The Circuit Court of Appeals for the Second Circuit, in *Edison Co.* v. *United Co.*, 52 Fed. 300, passed upon the meaning of the provision in the Canadian Patent Act, that "*if a foreign patent exists, the Canadian patent shall expire at the earliest date on which any foreign patent for the same invention expires*," and held, as appears from head-note 6 (52 Fed. 300), that it "refers only

to foreign patents which exist before the issue of the relevant Canadian patent."

But, as above shown under Point Two, p. 54, the House of Lords of England, construing the same words in the Canadian Patent Act as it existed when the Berliner-Suess Canadian patent was granted on Feb. 11, 1893, subsequently held, in *Dominion Cotton Mills Co.* v. *General Engineering Co.*, L. R. App. Cas. (1902), p. 570, that a Canadian patent must expire with a foreign patent for the same invention existing *at any time* during the continuance of the Canadian patent. "Their Lordships" could "find no limit as to time except that the foreign patent must both *exist* and *expire after* the Canadian patent has been granted and before it has ceased from any other cause."

The Canadian Act as it existed at the time of the decision of the Circuit Court of Appeals is set out in the opinion (52 Fed. 312). The Canadian Act as it existed at the time of the decision of the House of Lords, is as follows;

> "8. Any inventor who elects to obtain a patent for his invention in a foreign country before obtaining a patent for the same invention in Canada, may obtain a patent in Canada, if the same be applied for within a year from the date of the issue of the first foreign patent for such invention; and, if within three months after the date of the issue of a foreign patent, the inventor gives notice to the commissioner of his intention to apply for a patent in Canada for such invention, then no other person having commenced to manufacture the same device in Canada during such period of one year, shall be entitled to continue the manufacture of the same after the inventor has obtained a patent therefor in Canada, without the consent or allowance of the inventor; *and, under any circumstances, if a foreign patent exists,*

> *the Canadian patent shall expire at the earliest date on which any foreign patent for the same invention expires.*" 55-56 V., c. 24 s. 1, *Statutes* of *Canada*, 1892, Vol. 1-2, p. 95.

This provision, 55-56 V., c. 24, s. 1, was in force at the time the Berliner-Suess Canadian patent was issued on February 11, 1893 (p. 156, fol. 468; p. 181, fols. 181-188). The Canadian patent was applied for May 5, 1891 (p. 169, fol. 507) within a year from the date of the prior French patent, May 6, 1890. The House of Lords, in the *Dominion Company* case, *supra*, said (p. 572);—

> "This act came into operation on July 9, 1892, and applied to all Canadian patents *granted* after that date."

In *Western Electric Co.* v. *Citizens' Tel. Co.*, 106 Fed. 215, Judge Severens, speaking with reference to the expiration of prior foreign patents, said (p. 218);—

> "It may be that the court ought to take notice of such a fact, it being within the range of information conveyed by encyclopedias and other repositories of facts of general interest."

As above shown, all the essential facts are before the court. The above defense seems absolute. Judge Townsend's decision was given in order that the questions of law involved, especially the questions of expiration arising under § 4887 of the Revised Statutes, should be determined at the earliest possible moment by the Appellate Court on appeal. The evidence conclusively shows, without contradiction, that the Suess French patent is identical in all respects, including the specification, drawings and claims of U. S. letters-patent to Suess No. 427,279, of May 6, 1890 (p. 80, fol. 238). Furthermore, by reason of *complainant's* stipulation in the prior suit, the Suess French patent is to be re-

garded as being the same as the patent in suit and was treated as such under the stipulation in the prior suit. The motions in the suits at bar rest absolutely upon the record, and the decision reached, in the prior suit, and the court, of course, is at liberty to examine the record in the prior suit as filed in the clerk's office in the Circuit Court and in the Circuit Court of Appeals, to ascertain what was before the courts in the prior suit. The question in the suits at bar is, according to familiar law, whether any *new* evidence is presented, the Berliner-Suess Canadian patent, which, had it been presented to the Courts in the prior suit as part of the evidence therein, would have led the courts to reach a different conclusion. Clearly, had the Berliner-Suess Canadian patent been part of the evidence in the prior suit, the courts would necessarily have been led to hold in that suit that, in view of the prior Suess French patent, the Suess Canadian patent expired on May 6, 1905, if it did not expire in 1899.

There remains but little to be said upon this conclusive defense. Referring to claims 1-5 of the Suess French patent No. 205,491, of May 6, 1890, identical with claims 1-5 of the Berliner-Suess United States patent No. 427,279, of the same date, and comparing them with the claims of the Berliner-Suess Canadian patent, it appears that claim 1 of the French patent is, word for word, the same as claim 6 of the Canadian patent; that claim 2 of the French patent is identical with claim 8 of the Canadian patent; that claim 3 of the French patent is identical with claim 9 of the Canadian patent; that claim 4 of theFrench patent is identical with claim 4 of the Canadian patent; and that claim 5 of the French patent is identical with claim 10 of the Canadian patent. As above shown, the drawings and specification of the French patent are

identical with the drawings and specification of the United States patent, and, therefore, identical with the drawings and specification of the Canadian patent as a comparison of the United States and Canadian patents will show. The stipulation in the suits at bar shows that the drawings of the Canadian patent are identical with the drawings of the United States patent (T. case, p. 555, fol. 1663; L & C case, p. 541, fol. 1621). In the suits at bar, as in the prior suit, the useless printing of duplicate copies of identical exhibits was dispensed with to save time and expense (T. case, p. 557; L. & C. case, p. 543). The only difference, therefore, between the Suess French and Canadian patents is that certain claims of the Canadian patent are not contained in the French patent. Without any question the structure described, illustrated and claimed in the French patent would infringe all of the claims of the Canadian patent not contained in the French patent, and of course, the structure described, illustrated and claimed in the French patent would infringe the claims of the Canadian patent which correspond, word for word, to the claims of the French patent. The identity of invention is established, therefore, under the test laid down by the Supreme Court in *Commercial Mfg. Co.* v. *Fairbank Co.*, 135 U. S. ,176, and other cases cited *supra* under Point Two sub-division (*g*), p. 55. Moreover, as shown by the authorities cited under Point Two, especially under sub-division (*m*) thereof, p. 69, as stated by Judge Brown in the *Sawyer Spindle Co.* case, 133 Fed. 238, 241, "the rules which are applied to determine the question of double patenting when United States patents are involved" are "also applicable when the question is whether the invention has been first patented in a foreign country." Therefore, under the decision of the Supreme Court in *Miller* v. *Eagle Mfg. Co.*, 151

U. S. 186, quoted under Point Four, sub-division (*h*), p. 102, it is clear that, after the granting of the French patent, a second patent could not be granted for the claims of the Canadian patent not contained in the prior French patent, since the claims of the French patent *necessarily involve* the features, and *all* of the features, of the claims (1, 2, 3, 5, 7, 11, 12 and 13) of the Canadian patent not contained in the French patent. As Judge Wallace said in *Thomson-Houston Co.* v. *Hoosick R. Co.,* (C. C. A.), 82 Fed., 461, 465-467, quoted *supra* under Point Four, sub-division (*j*), p. 109, reversing Judge Townsend on the point here under discussion "the matter sought to be covered by the second patent" would be "*inseparably involved* in the matter embraced in the former patent, and this, under the authorities, renders the second patent void, *Miller* v. *Mfg. Co.* 151 U. S., 198." As shown, *supra,* under Point Two, sub-divisions (*h*) p. 58 and (*p*) p, 77, *the broadening or the narrowing of the invention or the claims of a home patent will not save the home patent.*

The decision of Judge Brown in *Sawyer Spindle Co.* v. *Carpenter,* 133 Fed. 238, 241, quoted, *supra,* under Point Two, sub-division (*m*), p. 69, is directly in point. Judge Brown there said;—

> "Two *patents* and two *claims* may be regarded as for the *same invention,* though one claims a *special machine,* and the other claims broadly a genus which includes the former *Otis Elevator Co.* v. *The Portland Co.,* 127 Fed. 557 (C. C. A.); *Miller* v. *Eagle Mfg. Co.,* 151 U. S. 186; *Robinson on Patents* §464,465, vol. 2, p. 45. When this is the case, though the American claim may be broader than that of the prior British patent, it is still true that what is claimed under the generic claim *has already been patented in a foreign country.*"

The point is so clear that the Suess French and Canadian patents cover one and the same invention and that the subject matter of the claims of the Canadian patent, not contained in the French patent, is inseparably involved in the structure and in the claims of the French patent, that it would be useless to do more than to request the court to inspect the drawings and read the claims and specification of the French patent, identical with U. S. patent 427,279, in order to ascertain the elements thereof and thereby see how impossible it would be to make a structure according to the specification and claims of the French patent which would not infringe every claim of the Canadian patent and which would not involve every feature and element, essential and not essential, of the invention of the Canadian patent.

Beyond all question, therefore, if the Canadian patent describes and broadly claims the invention of the claims here in suit, as Judge Townsend found, and if the claims here in suit are not to be limited by the details of construction of the reproducer shown in Figs. 6 and 7 of the patent in suit, it follows that *the patent in suit expired with the Berliner-Suess Canadian patent;* and that, if the Berliner-Suess Canadian patent did not expire in 1899, as argued under Point Eight, *it necessarily expired on May 6, 1905, with the expiration of the term of the prior French patent and carried with it the patent in suit.* As the patent in suit expired, under any view, before the making of the motions for preliminary injunction, the Circuit Court erred in the granting of the motions, and the orders appealed from should be reversed, upon the assignments (21, 22, 34 and 35) of errors.

POINT TEN.

Berliner patent in suit No. 534,543 was anticipated by English patent No. 1644, of 1878, to Edison, as to claims 5 and 35, if those claims are to be broadly construed and not limited by the special form of reproducer shown in Figures 6 and 7.

Although this English patent to Edison was in the record in the prior suit against the American Graphophone Company before Judge Hazel and the Circuit Court of Appeals, the defense now presented to the court was not raised. The defence is supported by the affidavit of defendants' expert, Mr. Goss (p. 297). In the prior suit this defence was not referred to in the evidence, nor in the briefs, oral arguments of counsel or opinions of the courts. It was not presented, considered or passed upon and should now be decided according to its merits and not dismissed without examination as was done by Judge Townsend merely because the lengthy patent out of which the defence arises was in the record. If counsel in the prior suit was not aware of the defence or did not appreciate its importance, that is no reason why it should not now be sustained on the *new evidence* in these suits, *if the defence is good and valid.* "Comity has no application to questions *not considered* by the prior court, or, in patent cases, to alleged anticipating devices which were not laid before that court. As to such the action of the Court is purely original." (*Mast, Foos & Co. v. Stover Mfg. Co.*, 177 U. S. 485).

Figs. 1 and 2 of the Edison patent No. 1644 of 1878 were cited merely in support of the conten-

tion that the Bell and Tainter patent No. 341,214 was an anticipation of claims 5 and 35 of the patent in suit. Counsel for the American Graphophone Company on p. 16 of their brief submitted to Judge Hazel said, with reference to this Edison English patent;—

> "(1.) In Edison's British patent, No. 1644 of 1878, figs. 1 and 2 (D. R., p. 134), is shown a machine of the disc type in which the reproducer is carried by an elongated arm pivoted to a stationary support. The propulsion of the stylus is effected by a pin engaging a spiral-groove 3 (fig. 2), which performs the function of a feed-screw. It is clear that when Bell & Tainter brought into existence the freely-mounted reproducer, free to be guided *by the record-groove itself, there* could be no possible novelty or invention in the use of an elongated reproducer-arm pivoted on a fixed support, as in this Edison patent, and having a range of movement on its pivot sufficiently ample to cover the entire width of the record."

It is clear that the attention of Judge Hazel and of the Circuit Court of Appeals was not directed to figures 34 and 37 of Edison British patent No. 1644 of 1878, or to that part of the specification (p. 8, lines 47-53; p. 9, lines 11-14) describing figures 34 and 37 as follows;—

> "Fig. 34 is a perspective view showing a double phonet, there being a spiral line of indentations on each side of the revolving disk *d*, one phonet coming into action as the other finishes; in this case the spirals should be in opposite directions, *so that the disk continuing to revolve in the same direction moves one phonet from the center outwards*, and *then the other phonet is connected and moved back towards the center;* this may be used as a toy."

> "Fig. 37 represents the phonograph or phonet upon a *pivoted arm, so that it may swing across* or *at right angles* to the line of

> movement of the intended (indented) material or phonogram. In this case the line of indentations may be lengthwise of the belt, or across the same in the arc of a circle."

Here then, in Figure 34, we have the rotating record tablet having spiral grooves thereon constituting the sound record and the spiral groove of the sound record without any feeding mechanism whatever, causes the reproducing stylus mounted on an arm that swings toward and from the center of the disc to move across the face of the record. At p. 2, lines 7-11, Edison says: "the phonograph is on an arm that swings toward and from the center of the disc, and is guided by grooves or other convenient mechanism. The phonet device takes the place of the phonograph device when the sounds are to be reproduced." In figure 34 we have the phonet mounted on an arm that swings toward and from the center of the disc and guided by the grooves of the *sound record itself* across the face of the disc and not by anything else whatever. On p. 2, line 55, it is said that the phonogram may be made in the form of a *disc*, and that the marks constituting the record may be straight lines, spiral, *zigzag* (which is the common term for a record having lateral undulations) or in any other convenient form. Here then, we have a complete anticipation of claims 5 and 35 of the patent in suit under the broad construction thereof contended for by complainants. The subject matter of this defense arising out of figure 34, has been so fully stated by defendants' expert, Mr. Goss, in his affidavit and exhibit thereto annexed (pp. 297-308), and the point is so clear from an inspection of figure 34 of the said Edison British patent and of the model which is herewith submitted to the court as an illustration of the operation of figure 34, that it is unnecessary to say anything further

in support of this defense. The use of a swinging arm capable of moving laterally and vertically or in other words, having a universal joint (English patent No. 1644 of 1878, p. 4, lines 45-48), and carrying at its free end a phonet or reproducer with a reproducing stylus in engagement with the walls of the record groove, and the vibrating and propelling of the reproducing stylus across the face of the disc by the walls of the groove of a rotating record table is old, as appears from Edison's very early patent No. 1644, of 1878 of Great Britain, as well as from the Suess Canadian patent already discussed. All that Berliner did was to invent certain improvements in the very details of the construction of his recorder and of his reproducer. He constructed a lever bent at right angles at about its middle carrying a stylus at its free end and attached to the diaphragm and the diaphragm casing, as already described. Unless claims 5 and 35 of the patent in suit are limited by that feature, that is by his special form of reprducer, the claims are anticipated and are invalid. Edison in his first United States patent No. 200,521, of February 19, 1878, in figure 3, also shows the production of a *zigzag* record and *lateral* undulations of the point of the recording stylus. This he describes at p. 2, top of second column, saying:

> "I do not wish to confine myself to reproducing sound by indentations only, as the transmitting or recording device may be in a *sinuous* form, resulting from the use of a thread passing with paper beneath the pressure-rollers *t*, (see Fig. 3), such thread being moved *laterally* by a fork or eye adjacent to the roller *t*, and receiving its motion from the diaphragm G, with which such fork or eye is connected, and thus record the movement of the diaphragm by the impression of the thread in the paper *to the right and left* of a straight line, from which indentation the receiving-dia-

phragm may receive its motion and the sound be reproduced, substantially in the manner I have already shown."

In English patent No. 6027, of 1886 to Johnson, p. 2, lines 23-31, it is said;—

> "The reproducing stylus *should be mounted so that it can readily be guided by the record.* This may be accomplished in different ways as for example by mounting the head of the reproducing instrument upon a joint which admits of a *lateral movement*, or the style may be so mounted as to be capable of a lateral movement, independently of a diaphragm and other parts of the reproducer—By this latter arrangement the style can accommodate itself to the record without having to put in motion the larger mass of the head of the reproducer. It therefore responds more quickly—Both arrangements will be illustrated."

Clearly the idea of guiding the reproducing stylus by the record was old, and Edison disclosed the principle as applied to a machine operating precisely as complainants' exhibits of defendants' machines operate. This he did in figure 34 and the description thereof above quoted, as well as in figure 37 and the description thereof above quoted from English patent No. 1644, of 1878.

The apparatus shown in figures 34 and 37 of English patent No. 1644 of 1878 are claimed by Edison in the first and tenth claims thereof, which read as follows;—

> "First. The combination with the *diaphragm* and *point* of a *flat* receiving surface and means for revolving the receiving surface, and *causing the point to follow a volute or spiral line*, substantially as represented in Figs. 1, 2, 6, 7, 8, 9, 10, 15 and *34*.
>
> "Tenth. The mechanism for producing a phonogram, and employing the same in a phonet, substantially as described, and illustrated in Figs. 32, 33, 35, 36 and *37*."

These claims clearly set forth the elements of claims 5 and 35 of the patent in suit, unless claims 5 and 35 are limited by the special form of reproducer shown in figures 6 and 7, which reproducer is not used by defendants. For comparison claims 5 and 35 are set forth;—

> "5. The method of reproducing sounds from a record of the same which consists in vibrating a stylus and propelling the same along the record by and in accordance with the said record, substantially as described.
>
> "35. In a sound reproducing apparatus consisting of a traveling tablet having a sound record formed thereon and a reproducing stylus shaped for engagement with said record and free to be vibrated and propelled by the same, substantially as described."

The apparatus disclosed by figures 34 and 37 of the Edison English patent and protected by the first and tenth claims thereof would unquestionably infringe claims 5 and 35 of the patent in suit if claims 5 and 35 are not limited as above stated; hence they would anticipate, under the well settled rule that "that which infringes if later, would anticipate if earlier", (American Co. v. Streat, 83 Fed. 700, 703, and cases cited).

Fig. 34 of Edison's English patent, the *fundamental* patent in the art, shows a more practical device, than does Fig. 10 of Berliner patent No. 564,586 upon which alone complainants rely. As shown, *supra*, under Point Seven, subdivision (*j*), p. 139, the device of Fig. 10 was impractical and a mere laboratory experiment, which never went into use. Defendants' machines are Suess machines, which differ more from Fig. 10 of the Berliner patent than from Fig. 34 of the Edison patent.

POINT ELEVEN.

In the prior suit between complainants and the American Graphophone Company, decided by Judge Hazel and the Circuit Court of Appeals, complainants, by contract, promised the defendant, The American Graphophone Company, a license under the patent in case defendant should lose, and promised also by the same contract to waive all claim for past royalties and damages. The prior suit was not, therefore, a suit in which Berliner patent in suit No. 534,543, of February 19, 1895, was fairly in controversy. The Circuit Court of Appeals has held defendant was guilty of laches in its search for defenses in that suit.

The proposition of this point admits of no question whatever.

The motions for preliminary injunction in the suits at bar were argued on April 13, 1906. Counsel for the American Graphophone Company in the prior suit, Mr. Mauro, was present at the argument and followed the proceedings. Judge Townsend's opinion, resolving the doubt in favor of complainants in order to permit appeals to be taken, was filed April 26, 1906. Immediately after the argument of the motions before Judge Townsend and before Judge Townsend had had an opportunity to examine the questions and render his decision thereon, counsel for the American Graphophone Company seized upon one of the defenses, to the

exclusion and prejudice of the other defenses, which defendants had interposed before Judge Townsend, and having served his papers on April 18, 1906, moved in the Circuit Court of Appeals, in the prior suit of these complainants against the American Graphophone Company, for permission to apply to the Circuit Court for leave to file a bill in the nature of a bill of review. The ground of the motion was the expiration of the patent in suit by reason of the expiration of the Berliner-Suess Canadian patent in 1899. The only other ground upon which the motion was based was that defendant, the American Graphophone Company, would, in view of the Berliner-Suess Canadian patent and other matters, be able to show that Berliner caused the Suess French patent of May 6, 1890, to be granted upon the application of the said Suess. Upon the oral argument of the motion in the Circuit Court of Appeals and in his affidavit filed in support of the motion, counsel for the American Graphophone Company (*mirabile dictu*) said (p. 9, printed papers on the motion);—

> "*It is to the interest of the defendant, the American Graphophone Company, that the patent in suit should be sustained and enforced against other manufacturers of talking machines.*"

The Circuit Court of Appeals immediately on April 24, the day after the hearing of the motion, *denied the motion on the ground of laches* (145 Fed. 350).

In view of this holding of the Circuit Court of Appeals and of the facts above and hereinafter set forth, it is respectfully submitted that it will establish a most dangerous precedent to hold that, in a case where, by *contract* between complainant and defendant, it is to the interest of the defend-

ant to lose and to have the patent sustained and enforced against other persons, and where the Circuit Court of Appeals has found and held that defendant was guilty of laches in its searches for defenses, the patent was fairly in controversy and that the decision at final hearing in such a suit, even though affirmed on appeal, can be used as a basis for a motion for preliminary injunction against other defendants. If such is to be the practice established in patent litigation, by the affirmative action of the courts in approval thereof, the wrong and injustice which will accrue inevitably to innocent parties will be without measure. Although Judge Townsend says in his opinion that in the prior suit "*apparantly* every material defense was presented and discussed", the holding of the Circuit Court of Appeals, that the defendant was guilty of laches in its search for defences, and the serious new defenses urged in the suits at bar prove the contrary; and although Judge Townsend further states that "the contention that by reason of a certain contract between the parties 'the prior suit was not a suit in which the Berliner patent in suit * * * was fairly in controversy' is not deserving of notice," still, it is respectfully submitted that the contention is one deserving of very serious notice by this court and deserving also of the holding by this court that Judge Townsend erred in not denying the motions for preliminary injunction because of such contention lest, as above stated, a most dangerous precedent be established in patent litigation to the injury of innocent third parties who will be at the mercy of complainants and defendants agreeing in their own interest to conduct a suit in which both parties are interested in having the patent first sustained and then enforced by summary proceedings, at their joint expense, on mo-

tions for preliminary injunction against others whose opportunities to defend are necessarily limited and prejudiced.

The agreement dated December 8, 1903, between the Victor Talking Machine Company and the American Graphophone Company is one of the defendants' exhibits (p. 224). The provisions for the license by the Victor Company to the Graphophone Company in case, at final hearing, one or more of the Berliner patents mentioned, including the patent in suit, as to any broad claim or claims thereof, be sustained by the court, and for the waiver of past royalties and damages are to be found in paragraph 2 of the contract (p. 226). Although provision is made in the contract for the future payment of royalties, the amount of the royalties is not named (p. 226, fol. 677), and the contract contains a similar provision for the payment of royalties by the Victor Company to the Graphophone Company in case any patent of the Graphophone Company should be sustained at a final hearing (p. 227, par. 5). More surprising than the foregoing provisions, however, is that contained in paragraph 3 (p. 226), which provides that in case one or more claims of said Berliner patents "be sustained, as provided in paragraph 2, the said Graphophone Company shall thereafter, whenever so requested in writing by the Victor Company, assist in the prosecution of its suit brought and to be brought under the said Berliner patents against other parties, by furnishing its own counsel at its own expense, court costs to be divided, each party paying one-half", etc.

Clearly under this agreement it was to the interest of the American Graphophone Company, as its counsel has stated under oath, to lose and not to win the suit. By losing, the Graphophone Company would secure a license under a patent which

would be sustained at final hearing and which by agreement between the Victor Company and the Graphophone Company would be enforced at their joint expense against all other competitors.

We now understand why the foregoing defenses were not discovered or interposed. This was the cause of the *laches*. There was no incentive compelling counsel for the American Graphophone Company to search out and to present the defenses to the patent in suit. That they did not search out and present the defenses to the patent in suit clearly appears, and the lack of incentive so to do is shown positively by the agreement of December 8, 1903.

When counsel for the Talk-O-Phone Company and the Leeds & Catlin Company became aware of the existence of the agreement of December 8, 1903, through his presence at the argument at final hearing before Judge Hazel in June, 1905, he moved on behalf of the Talk-O-Phone Company and the Leeds & Catlin Company before Judge Hazel for leave to address the court with reference to the contract of December 8, 1903, and set forth in an affidavit verified June 8, 1905, (p. 216) the circumstances showing that a decision in a suit prosecuted pursuant to the terms of such a contract could not be a basis for relief by way of preliminary injunction against any other person thereafter to be sued by the Victor Company upon said Berliner patent in suit. Leave to address the court was denied. The proposed orders upon said motion, the affidavit of Louis Hicks verified June 8, 1905, presented upon said motion, and the correspondence with reference to the settlement of the order thereon are set forth at pp. 214-224 of the records and are verified in the affidavit of Hicks (p. 81, fol. 241).

Under such circumstances, and upon the showing made in the suits at bar, defendants should have

been afforded an opportunity to present their defences at final hearing before the granting of injunctions, and the Circuit Court erred in not so holding.

POINT TWELVE.

Defendants machines do not infringe claims 5 and 35 of the patent in suit when those claims are properly construed in view of the prior art disclosed by defendants in opposition to the motions.

The Talk-O-Phone Company manufactures talking-machines only and does not and never has manufactured sound records (aff. Hicks, p. 97, fol. 289; aff. Ensign, p. 99, fol. 295; aff. Irish, p. 283, fols. 849-850). The Leeds & Catlin Company manufactures sound records only and does not and never has manufactured talking-machines (aff. Leeds, p. 116, fol. 347; aff. Irish, p. 284, fols. 850-851; aff. Leeds, p. 292, fols. 875-876).

The Leeds & Catlin Company, moreover, has not been engaged in the purchase and sale of talking-machines with the exception of a few taken from the Talk-O-Phone Company in the settlement of an account (aff. Irish, p. 284, fol. 851; aff. Leeds, p. 292, fol. 876). Complainants allege and show by a moving affidavit, however, that the Leeds & Catlin Company sold one of these talk-o-phones. This raises the question of infringement with reference to the machines as to both defendants, although obviously the question is of small importance as far as the Leeds & Catlin Company is concerned, but of great importance as far as the Talk-O-Phone Company is concerned. The machines to be considered, however, are of the Talk-O-Phone Com-

pany. As fully explained under the preceding points of this brief, and especially under Point Six, dealing with the Suess Canadian patent, these talk-o-phones are constructed according to the gramophone of the Suess Canadian patent. As pointed out in defendants' affidavits (aff. Irish, p. 287, fols. 861-862; aff. Leeds, p. 296, fol. 886), defendants have never made, sold or used talk-o-phones provided with reproducers such as the reproducer of the patent in suit shown in figures 6 and 7. That the reproducers used in connection with the talk-o-phones are like the reproducer of the gramophone of the Suess Canadian patent and are not like the reproducer of the patent in suit is obvious furthermore from a mere inspection and comparison. Since claims 5 and 35 must either be limited so as to cover a method or apparatus employing the special reproducer of the patent in suit, shown in figures 6 and 7, or otherwise be held invalid, in view of the Suess Canadian patent and of Edison's English patent No. 1644 of 1878, and the other evidence referred to above in this brief, it follows that defendants' machines do not infringe either claim 5 or claim 35 of the patent in suit, assuming, contrary to the fact, that the patent in suit has not expired.

POINT THIRTEEN.

Complainants delayed the prosecution of these suits, took no testimony and defendants were entitled, at the time of the motions to dismissals of the bills upon the pleadings under the rules of the Circuit Court.

These suits were begun in the summer of 1904, defendants appeared and interposed demurrers to

the bills (aff. Hicks, pp. 76-77, fols. 228-229). Complainants unreasonably delayed in bringing the demurrers on for hearing against the repeated protests of defendants' counsel, as appears from the correspondence between Mr. Pettit, complainant's counsel, and Mr. Hicks, defendants' counsel, set forth in the record (pp. 198-211). This appears particularly from the letters of April 21, June 14, November 20, and November 22, 1905 (pp. 200-203). The demurrers were argued before Judge Holt, who held that the points raised should be passed upon at final hearing. Complainants then delayed in entering the order overruling the demurrers and did not enter the order until requested so to do by defendants' counsel (p. 205, fol. 643). Thereupon, defendants promptly filed their answers on December 21, 1905 (p. 77, fol. 229), but complainants neglected to file their replications on the January, 1906, rule day. Defendants' counsel was assured that the replications would be filed as of the January, 1906, rule day, and for that reason, over the telephone, consented, on request of complainant's counsel, for a delay of one or two days after the January, 1906, rule day for the filing of the replications. The replications, however, were not filed until the February, 1906, rule day (p. 45, fol. 133), and since that date no testimony whatever had been taken by complainants in either suit (aff. Hicks, p. 77, fol. 230).

This is a case where the rules of the court should be strictly enforced, since it clearly appears that complainants p. cuted their suit against the American Graphophone Company under the agreement of December 8, 1903, and studiously avoided bringing the suits against these defendants to final hearing, although repeatedly informed that defendants were prepared to show the invalidity of the patent in suit (p. 204, fols. 610-611).

Rule 109 of the equity rules of the Circuit Court provides;—

> "When no proceedings are taken by either party within thirty days after replication, for the examination of witnesses out of court, either party may set the cause down for hearing upon the pleadings."

Under this provision the cause was properly before the court for hearing upon the pleadings. Defendants were entitled to have the causes heard upon the pleadings. More than three months had elapsed since the January, 1906, rule day, and nearly three months had elapsed since the replications were actually filed on the February, 1906, rule day. The making of a motion for preliminary injunction under such conditions when the entire testimony, under the rules, could have been taken and presented to the court for final hearing and decision upon the merits was preposterous, when the repeated protest of the defendants against such procedure, as set forth in the correspondence referred to, is considered.

It is very clear why complainants delayed the prosecution of these suits against these defendants. Complainants were aware that defendants had been ready to show the invalidity of the patent in suit. Complainants were prosecuting their test case against a defendant whose interest it was to lose, and complainants so regulated their proceedings as to expedite the cause against the American Graphophone Company and to delay the trial of these suits against these defendants.

POINT FOURTEEN.

Sound records having lateral undulations existed before the date of the invention of the patent in suit and were patented by Berliner in several forms in divers patents which have expired. Such records are capable of use with machines of various constructions. The proposition that the making and selling of such sound records can be an infringement of the patent in suit is untenable.

As pointed out with reference to the record in the opening of Point Thirteen, the Talk-O-Phone Company does not and never has manufactured sound records. The Leeds & Catlin Company does and has manufactured sound records of various kinds, including disc sound records having zigzag or lateral undulations. The threatening circular letter of complainant company (p. 211, fols. 632-633) and of complainant's counsel (pp. 212-213) indicate that it is complainants' contention, and that it is complainants' purpose to state to the trade, that all disc sound records are infringements of claims 5 and 35 of the patent in suit. In view of the great injury which has been caused to defendants by reason of complainants threatening letters to the trade, and because the contention is entirely without foundation, it becomes important, especially for the Leeds & Catlin Company, that this point be passed upon by the court, should the court for any reason hold that the patent has not expired, and that claims 5 and 35 are entitled to a construction broad enough to cover defendant's machines.

What then are the facts shown by the evidence

with reference to disc sound records? At the outset we have Edison's English patent No. 1644 of 1878, speaking of the zigzag form of a record (p. 2, line 55) and disclosing disc sound records in figures 2 and 34, for example, which figures 2 and 34 also show the use of disc sound records in connection with machines involving as to figure 34, the identical mode of operation of defendant's machines and involving as to figure 2 the identical mode of operation, except in so far as that mode of operation may be limited by the use of the spiral guide groove 3. Likewise, in Edison's first United States patent No. 200,521 of February 19, 1878, disc sound records and records with lateral undulations are described as follows (p. 2);—

> "It is obvious that many forms of mechanism may be used to give motion to the material to be indented. For instance, a revolving plate may have a volute spiral cut both on its upper and lower surfaces, on the top of which the foil or indenting material is laid and secured in a proper manner. A two-part arm is used with this disk, the portion beneath the disk having a point in the lower groove, and the portion above the disk carrying the speaking and receiving diaphragmic devices, which arm is caused, by the volute spiral groove upon the lower surface, to swing gradually from near the center to the outer circumference of the plate as it is revolved, or *vice versa*."

When Bell & Tainter invented the graphophone their sound records were disc sound records. In patent 341,214 of May 4, 1886, applied for June 27, 1885, one of the fundamental patents in this art, the sound record shown is a disc sound record (p. 3, lines 24-29). Indeed, all disc sound records having lateral undulations are made to-day in accordance with the invention of patent No. 341,214 for cutting or engraving in wax or a wax-like sub-

stance. In Berliner's patents No. 372,786 of November 8, 1887 and No. 382,790 of May 15, 1888, disc sound records having lateral undulations formed the subject matter of the specifications and claims. Since these patents have expired, the disc sound records with the lateral undulations have become public property. Futhermore, Berliner patent No. 564,586, applied for November 7, 1887, has, without question, expired with English patent No. 15,232 of November 8, 1887, and with the corresponding first German and French patent to Berliner for the same invention. In all these patents, No. 564,586, and the corresponding English, German and French Berliner patents, Berliner described his disc sound record having lateral undulations and furthermore he described his gramophone, not only for the recording, but also for the reproducing of such disc sound records. Figure 1 of patent No. 564,586, shown also in the corresponding English, German and French patents is a reproducing machine as well as a recording machine, and such a machine is public property for the recording of sound and for the reproduction of sound from disc sound records. There are also Berliner's English patent No. 7204 of 1888, for a disc sound record, which has expired, French patents to Berliner, three in number, all of which have expired, and German patents to Berliner, three in number, all of which have expired.

In patent No. 385,886 to Tainter, of July 10, 1888, the sound record is shown as a disc (p. 2, line 129). At p. 3, lines 7-19, it is said;—

> "While it is preferred to use a tablet of this description and to form the record by cutting or engraving therein, as described in patent aforesaid (341,214), it is obvious that the machine is also adapted to operate in connection with a recorder that produces a record by indenting in a pliable substance or *by removing*

*part of a thin film of lamp black** or in any other practical way. The construction of the recorder and reproducer is or may be such as described in previous patents, and, therefore needs no particular description here."

* This is Berliner's disc sound record having lateral undulations made according to his patents which have expired.

It would be tedious and unnecessary further to deal with the patents of the prior art showing that disc sound records having lateral undulations existed before the date of the invention of the patent in suit, and that various machines had been invented and constructed before the date of the invention of the patent in suit and used in connection with such disc sound records. Under the following point, it will be shown that the talk-o-phones operating with the aid of mechanical feed devices cannot possibly be construed as infringements of claims 5 and 35 of the patent in suit and that such talk-o-phones are likewise adapted for use with disc sound records having lateral undulations. In the affidavit of Leeds (pp. 293-296), it is fully shown that the contention of the moving affidavits that disc sound records having lateral undulations can be used only on machines made according to claims 5 and 35 of the patent in suit is untrue and that the contention of the moving affidavits that machines made according to claims 5 and 35 can be used only with disc sound records having lateral undulations is likewise untrue. Mr. Leeds points out the different kinds of records and talking machines that have been made and put upon the market and are upon the market to-day, and shows that disc sound records having lateral undulations existed long prior to the date of the invention of the patent in suit, and that Berliner himself secured patents covering disc sound records and machines for repro-

ducing sound from the same, and that all of Berliner's said patents have expired. To the same effect in the affidavit of Mr. Irish (pp. 285-288, fols. 853-862), and the affidavit of Mr. Ensign (p. 114).

The Leeds & Catlin Company manufactures and sells for export and exports hundreds of thousands of disc sound records having lateral undulations and does not sell in connection therewith machines of any kind (aff. Leeds, p. 294, fol. 882). Under no circumstances could such manufacture and sale infringe claim 5 or claim 35 of the patent in suit (*Bullock Co.* v. *Westinghouse Co.*, 129 Fed. 105). Since the records are adapted for use on machines of different kinds, as above shown, not covered by the patent in suit, the manufacture and sale thereof in the United States cannot be held to be an infringement, (*Edison Co.* v. *Peninsu'ar Co.*, 101 Fed. 831). Moreover, Berliner's expired patents covering such records cannot be prolonged.

POINT FIFTEEN.

The Talk-o-phones operating by mechanical feed devices do not infringe claims 5 and 35 of the patent in suit.

As complainants, in the Circuit Court, refused to contend that the talk-o-phones, operating by mechanical feed-devices, are an infringement of claims 5 and 35, this point is of importance only in so far as it bears upon the prior art.

Berliner in his testimony in the suit against the American Graphophone Company (p. 241, fol. 723) said;—

> "The two claims, 5 and 35, refer to any apparatus in which the record groove both propels and vibrates the reproducing stylus or sound box, and it practically means *to the ex-*

> *clusion of a feed screw* for that purpose, or of any other device outside of the record groove itself, by which the sound box or the reproducing stylus may be propelled across the record surface."

Such is the testimony of the moving affidavits. That is what Suess states in his Canadian and United States patents when he says: "I rely upon this control of the stylus by the walls of the record groove for the movement of the stylus across the face of the disc, there being no positive feeding mechanism for thus moving the stylus."

The construction and operation of the talk-o-phones with mechanical feed devices are described in defendant's affidavits (aff. Hicks, pp. 96-97; aff. Ensign, pp. 111-112, fols. 333-336, p. 114, fol. 342; aff. Irish, p. 286, fols. 857-858; aff. Leeds, p. 293, fol. 878, p. 295, fol. 883). A copy of the description and claims upon an application for a patent therefor on behalf of the Talk-O-Phone Company is one of defendants' exhibits (p. 275). And the machines, Exhibits A and B, show the talk-o-phones with the mechanical feed devices, which, as Mr. Irish states in his affidavit, have been advertised by the Talk-O-Phone Company at an expense of from $22,000 to $23,000. Mr. Ensign summarizes the differences between complainant's machines and talk-o-phones with mechanical feed devices. He says (p. 114, fol. 342);—

> "The Talk-O-Phones with the mechanical feed devices (Exhibits A and B) are *recording* as well as *reproducing* machines. They will *record* sound upon the usual tablets and will reproduce sound from the record of the same after recording. Thus it appears that the movement of the stylus across the face of the record in such Talk-o-phones depends *solely upon the mechanical feed device.* Complainants' machines will *not record* but will *only* reproduce, thus showing that complainants'

machines depend entirely upon the record groove for the movement of the stylus across the face of the record."

Clearly any contention on complainants' part that the talk-o-phones with mechanical devices are an infringement of claims 5 and 35 of the patent in suit could not have been made in good faith. Complainants' letters threatening the trade make such contention (p. 213, fol. 637-638) and such letters have caused great injury to the Talk-O-Phone Company (aff. Irish, p. 284, fol. 852, p, 288, fol. 864).

Without question the talk-o-phones with mechanical feed devices do not infringe either claim 5 or 35 of the patent in suit, and in view of the wrongful, misleading and threatening letters which complainants have been sending to the trade with respect to such talk-o-phones in connection with the patent in suit, it is respectfully submitted that defendants should be protected by the court therefrom.

Mechanical feed devices are shown in the following patents of the prior art, all of which have *expired*;—

No. 1644 of 1878 to Edison (English,
No. 191,464 of May 29, 1877, to Pickering,
No. 200,521 of February 19, 1878, to Edison,
No. 213,554 of March 25, 1879, to Edison,
No. 219,939 of Sept. 23, 1879, to Hall,
No. 227,679 of May 18, 1880, to Edison,
No. 238,929 of Mch. 15, 1881, to Legge (Fig. 2)
No. 277,349 of May 8, 1883, to Rogers,
No. 283,665 of Aug. 21, 1883, to Rogers,
No. 287,166 of Oct. 23, 1883, to Reynolds,
No. 295,219 of Mar. 18, 1884, to Absterdam,
No. 341,214 of May 4, 1886, to Bell & Tainter,
No. 341,288 of May 4, 1886, to Tainter,
No. 372,786 of Nov. 8, 1887, to Berliner,

No. 375,579 of Dec. 27, 1887 to Tainter,
No. 382,790 of May 15, 1888 to Berliner,
No. 385,886 of July 10, 1888, to Tainter,
No. 564,586 of July 28, 1896, to Berliner (expired),
No 6027 of 1886 to Johnson (English)
No. 15,232 of 1887, to Berliner (English)
No. 7204 of 1888, to Berliner (English)
No. 45,048 of 1887, to Berliner (German)
No. 186,827 of 1887, to Berliner (French).

As set forth in the affidavits above referred to the talk-o-phones with mechanical feed devices are constructed in accordance with Figs. 6-10, especially, of Edison's English patent No. 1644 of 1878.

CONCLUSION.

It appearing that the patent in suit expired before either of these suits was begun and that the claims in suit are invalid or not infringed, the motions for preliminary injunction should have been denied and the bills dismissed. The orders should, therefore, be reversed with directions to dismiss the bills.

That the Circuit Court upon the hearing of a motion for preliminary injunction has the power, not merely to deny the motion, but also to dismiss the bill, appears from the following cases: *Harriman v. Northern Securities Co.*, 197 U. S., 244,286, where such action of the Circuit Court as well as of the Circuit Court of Appeals was cited with approval; *Castner* v. *Coffman*, 178 U. S., 168; *Mast, Foos & Co.* v. *Stover Mfg. Co.*, 89 Fed., 333,337 (affirmed 177 U. S., 485), where the power of the

Circuit Court of Appeals under such circumstances was asserted and exercised, and where the Court said that "it is not consistent to say that the decision of an inferior Court must be pronounced on one basis and reviewed on another." See, also, De Laval Co. v. Vermont Co., 109 Fed., 813, and Streat v. American Co., 115 Fed., 634.

It is, therefore, respectfully submitted that, for the reasons stated in the foregoing points, the orders appealed from should be reversed with directions to dismiss the bills.

LOUIS HICKS,
Counsel for Defendants-Appellants.

No. [redacted] 80.

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IN THE

Supreme Court of the United States.

October Term, 1906.

LEEDS & CATLIN COMPANY,
Petitioner,

v.

VICTOR TALKING MACHINE COMPANY, and UNITED STATES GRAMOPHONE COMPANY,
Respondents.

RE PETITION FOR WRIT OF CERTIORARI, RE MOTION FOR PRELIMINARY INJUNCTION.

Brief on Behalf of Respondents in Opposition to the Petition.

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International, 236 Chestnut St.

IN THE

Supreme Court of the United States.

October Term, 1906.

LEEDS & CATLIN COMPANY,
Petitioner,

v.

VICTOR TALKING MACHINE COMPANY, AND UNITED STATES GRAMOPHONE COMPANY,
Respondents.

RE PETITION FOR WRIT OF CERTIORARI. FROM DECREE GRANTING PRELIMINARY INJUNCTION.

BRIEF ON BEHALF OF RESPONDENTS IN OPPOSITION TO THE PETITION.

To the Honorable Chief Justice and Associate Justices of the Supreme Court of the United States:

These respondents respectfully oppose the granting of the Petition for writ of Certiorari, among other reasons, upon the grounds:

1. That there is nothing in this case which should take

it out of the ordinary rule as to the finality of a decision of the U. S. Circuit Court of Appeals in like cases, or which should warrant the intervention of this Honorable Court to review the decision of the U. S. Circuit Court of Appeals, which is the Court of ultimate appeal in cases of motion for preliminary injunction to restrain infringement of Letters Patent. The main questions involved were questions of fact.

2. That the questions involved in this case, relative to the construction of Sec. 4887 of the Revised Statutes as well as 4886, have been fully settled and determined in a number of cases, both by this Honorable Court and by the U. S. Circuits Courts of Appeal of various circuits; and there is no new question herein presented, or any question which would warrant this Court in making an exception of this case, and in granting the Petition.

3. The claims of the patent in suit have been previously sustained upon final hearing by the U. S. Circuit Court and by the Circuit Court of Appeals, of the second Circuit unanimously in a similar infringement after a most vigorous defense. In this case also the Circuit Court granted the injunction and the Court of Appeals unanimously affirmed the Circuit Court. There was no dissenting opinion.

4. That the decree in this cause is on motion for preliminary injunction, restraining the defendant from infringement of the patent in suit, which was granted in this case by the U. S. Circuit Court, for the Southern District of New York; that this decree of the U. S. Circuit Court, for the Southern District of New York, was unanimously affirmed, upon appeal, by the U. S. Circuit Court of Appeals, for the Second Circuit.

5. That the Defendant Company (the Petitioner herein), after the decision of the U. S. Circuit Court of Appeals, continued the infringement, and was held in con-

tempt, upon motion, by the U. S. Circuit Court, for the Southern District of New York; that the defendant (the Petitioner herein) thereupon appealed, and the order of the Circuit Court, holding the defendant in contempt, was affirmed by the U. S. Circuit Court of Appeals, for the Second Circuit, one judge dissenting. A separate petition for Certiorari has also been presented in the said Contempt Proceedings.

6. That the case has not yet been heard upon final hearing in the Circuit Court; complainants completed their *prima facie* proofs on the 13th day of November, 1906, but defendant (the Petitioner herein) has failed as yet to take any of its proofs on final hearing. The defendant (the Petitioner herein) has therefore its opportunity to again be heard, both in the Circuit Court, and upon appeal in the U. S. Circuit Court of Appeals; that this, therefore, is a Petition for a writ of Certiorari upon the decree in the Preliminary Injunction Proceedings—an interlocutory decree.

7. The Berliner Patent, No. 534,543, issued February 19, 1895, in suit, has been adjudicated and sustained in a prior suit upon final hearing, where the infringing devices were indentically the same, to wit, in the case of Victor Talking Machine Co., *et al.*, *v.* The American Graphophone Co. (140 Fed. Rep., p. 860). This decision was affirmed by the U. S. Circuit Court of Appeals, for the Second Circuit (145 Fed. Rep., p. 351).

8. That there are no questions involved in this case which would warrant the granting of the Petition for writ of Certiorari, under the rules laid down by this Honorable Court in such matters, this being merely an attempt on the part of the Petitioner, the losing party in the Circuit Court and U. S. Circuit Court of Appeals, to exhaust every means to prevent the writ of injunction, most properly granted both by the Circuit Court and the U. S. Circuit Court of Appeals.

This Petitioner, the Leeds & Catlin Company, has filed two petitions, viz.—

(a) A Petition for writ of Certiorari in the Injunction Preceedings.

(b.) A Petition for writ of Certiorari in the contempt proceedings.

These, however, are presented separately under separate covers and will be separately considered by the respondents.

RE PETITION FOR WRIT OF CERTIORARI IN THE INJUNCTION PROCEEDINGS.

The Petitioner herein presents in its Petition 14 points relative to the Injunction Proceedings, upon which it bases the said petition, and in which it claims the U. S. Circuit Court of Appeals, for the Second Circuit, was in error.

These points were considered by the U. S. Circuit Court of Appeals in the Injunction Proceedings, affirming the Circuit Court.

The Appellant's Brief (the Petitioner herein) contained 199 pages, and the Appellant's Brief (Respondents herein) contained about the same number. The matter was most thoroughly and exhaustively before the Court of Appeals. thoroughly and exhaustively before the Court of Appeals. A copy of this Respondents' Brief in the Court of Appeals is hereto annexed.

On September 28, 1905, Judge Hazel, in the U. S. Circuit Court, for the Second Circuit (140 Fed. Rep., p. 860), sustained the patent, after a most exhaustive defense on final pleadings and proofs, in the case of the Victor Talking Machine Co., *et al. v.* the American Graphophone Co. On March 1, 1906, the U. S. Circuit Court of Appeals, for the Second Circuit, affirmed the Court below (145 Fed. Rep., p. 351), in a decision by Judges Lacombe, Townsend and Coxe.

On April 26, 1906, on the motion for Preliminary Injunction in the present cause against the Leeds & Catlin Company, on the same patent and the same claims, the U. S. Circuit Court, for the Southern District of New York, in an opinion by Judge Townsend (146 Fed. Rep., p. 534), granted the Preliminary Injunction. On October 12, 1906, the U. S. Circuit Court of Appeals for the Second Circuit, affirmed the Court below, in an opinion by Judges Wallace, Lacombe and Coxe. (148 Fed. Rep., p. 1022—Per Curiam).

A similar suit was also prosecuted by the same complainants against the Talk-O-Phone Company, on the same claims of the said Berliner patent in the same Courts for a similar infringement, and like decrees were entered against the said Talk-O-Phone Company.

On January 5, 1907, Judge Lacombe, in the U. S. Circuit Court, for the Southern District of New York (150 Fed. Rep., p. 147), held the defendant (this Petitioner) **in contempt** of the writ of injunction previously granted, and on May 2, 1907, the Court of Appeals affirmed the said order of Judge Lacombe, holding the Leeds & Catlin Company **in contempt**—Judge Wallace dissenting.

In this particular case against the Leeds & Catlin Company, the Circuit Court has twice decided in favor of the complainants, and the U. S. Circuit Court of Appeals, in this particular case against the Leeds & Catlin Company, has twice decided in favor of the complainants. In the Injunction Proceedings, Judge Townsend, in the Court below, and Judges Wallace, Lacombe and Coxe, in the Appeal Court, have sustained the patent, and granted the injunction; while in the Contempt Proceedings, Judge Lacombe, in the Circuit Court, and Judges Hough and Coxe, in the Court of Appeals, have held the Leeds & Catlin Company to be in contempt—Judge Wallace dissenting. This is the only dissenting opinion in this long series of litigation, **five judges** deciding for the complainants, and **one judge** filing a dissenting opinion, as to the contempt only.

Re Petitioner's First Point.

The first point raised by the Petitioner (Petition, p. 3.) is, in substance, the contention that where a portion of a device contained in a United States patent has been patented in a prior foreign patent, the home patent expires with the prior foreign patent, although the home patent contains claims covering subject-matter not described or claimed in the foreign patent.

This question was quite fully discussed in the brief filed by the Victor Talking Machine Co., *et al.* in the U. S. Circuit Court of Appeals, on the appeal from the decree granting preliminary injunction, as were all the points raised in this Petition, and a copy of the Appellees' Brief is herewith attached for consideration, in considering this Petition.

The question involved in the Petitioner's first point is considered in the Respondents' Brief in the Circuit Court of Appeals, under the heading "Re Defendant's Points Two and Three"—Brief, pp. 60 to 111.

The facts in this case do not substantiate or warrant the Petitioner's contention under its first point.

The Petitioner contends that the German Patent, No. 53,622, of November 20, 1889, previously granted to Berliner, the patentee of the patent in suit, No. 534,543, issued February 19, 1895, describes and claims the invention of the home patent, in addition to other matter.

The Petitioner's counsel admits, as he must, that the invention patented in the prior German patent is for a sound box, which, at best, is only a detail part of the home patent, No. 534,543; he contends that as it is *an* invention which appears in the home patent in suit, it must, therefore, invalidate the home patent, though the principal invention of the home patent, claimed in claims 5 to 35, is admittedly not shown, or disclosed, in the prior German patent.

The broad claims or principal invention of the home patent, in suit, 5 and 35, read as follows:

"5. The method of reproducing sounds from a record of the same which consists in vibrating a stylus and propelling the same along the record by and in accordance with the said record, substantially as described.

"35. In a sound reproducing apparatus consisting of a traveling tablet having a sound record formed thereon and a reproducing stylus shaped for engagement with said record and free to be vibrated and propelled by the same, substantially as described."

The invention claimed in the above claims was **Mr. Berliner's broad basic invention,** as decided by the U. S. Circuit Court of Appeals, for the Second Circuit, in the Graphophone case, and in this Leeds & Catlin case and the Talk-O-Phone case, as hereinbefore pointed out.

This German patent, No. 53,622, merely describes and claims **a specific form of sound box.** (See Respondents' Appeal Brief, p. 62, etc.)

If this construction of reproducing sound box shown in the German patent is the same, as contended for by the Petitioner, as the construction of reproducing sound box shown in Figs. 6 and 7 of the home patent, in suit.—which however, we deny—it is only at best for a specific construction and minor part disclosed in the home patent, **and could not be considered a prior patenting of the principal invention,** as decided by this Honorable Court in the case of Seamans et al. v. Sellers et al., 123 U. S., p. 276. (See Respondents' Appeal Brief, Injunction Proceedings, p. 80, etc.)

These respondents, however, show in the Appeal Brief (p. 62, etc.) material differences in construction and operation between the two reproducing sound boxes. This German patent, therefore, can in no manner affect the principal invention of the home patent.

MR. BERLINER'S PIONEER INVENTION.

Mr. Berliner's invention, claimed in claims 5 and 35 of the home patent, as decided by the Circuit Court, and the Circuit Court of Appeals, both in the suit against the present defendant, and in the suit against the American Graphophone Co., was **a broad basic invention,** which departed radically from the prior art in talking machines, such as the Edison phonograph and the Graphophone, and produced and made possible a superior and more accurate sound reproducing apparatus, and method of reproducing sound. The reproducing stylus point was vibrated acoustically, and simultaneously propelled, by and in accordance with the sound record, keeping, at all times, the reproducing point in intimate, exact contact with the record of sound in the sound groove, as it was rotated past the stylus point from the beginning of the groove near the periphery to the end near the center. Mr. Berliner's invention very much simplified the method of reproducing sound, besides giving superior results, and gave to the world a device which has become one of the greatest commercial successes of the age, revolutionizing, in a large measure, the talking machine art.

The patent in suit will be found at pages 452 to 462 of the Record.

The Petitioner's contention, in substance, is that if only a detail part of any specific device shown, or claimed, in the home patent, no matter how minor, or unimportant, is previously patented in any foreign patent, the **principal invention** of the home patent will thereby become invalidated upon the expiration of said foreign patent.

It is respectfully submitted that there is absolutely no warrant for such a proposition, and that the case of Seamans, *et al.*, *v.* Sellers, *et al.*, (123 U. S. p. 276), not only does not sustain the Petitioner's contention, but clearly

shows that the principal invention must be in both the home patent and the prior foreign patent, in order to bring it within the statute, Sec. 4887.

CONSIDERATION OF AUTHORITIES.

The attention of the Court is called to the consideration of authorities set forth in Respondents' Appeal Brief, p. 82, etc.

The Petitioner's contention is contrary to the spirit of Sec. 4887.

In this connection, the attention of the Court is called to Respondents' Appeal Brief, p. 99, etc.

The Circuit Court of Appeals, for the First Circuit, in Westinghouse Electric Co. *v.* Stanley Improvement Co., (138 Fed. Rep., p. 823) considers the decision in the case of Seamans *v.* Sellers, *supra*, and points out how this case has been misinterpreted in some respects.

Defendant's counsel appears to rest his whole contention, in this connection, not upon the spirit of the decision in Seamans *v.* Sellers, but upon a misconstruction of a short sentence by Mr. Justice Bradley therein, viz:—

> "A patent cannot be construed as running partly from one date and partly from another."

The attention of the Court is respectfully called, in this connection, to a consideration of this point in Respondents' Appeal Brief, p. 104 to 111.

It is obvious that the main invention of a domestic patent cannot be invalidated, under our system of claims, by the mere fact that a detail, minor portion, separately claimed in the U. S. patent, may have been previously patented abroad.

Manifestly, Sec. 4887 contemplated that the **principal** invention of the home patent must have been previ-

ously patented abroad, in order that the U. S. patent for it should expire with the foreign patent.

Under the laws of the United States, certain claims may be invalid, by reason of anticipation or other reasons, while the remaining claims may be perfectly valid for the full period of the grant of the U. S. patent.

The attention of the Court is called to a *misleading statement* contained in the Petition (p. 5), where it says:

> "Moreover the patent in suit states that while one feature of the invention has reference to improvements in the method of recording, a feature not involved in any way in this suit, the other features of the invention have reference to the construction of the detail of both the recorder and reproducer of the gramophone (p. 1, lines 17—35 of the patent in suit)."

That this statement is misleading, is clear from a reading of the paragraph preceeding, p. 1, line 17, etc.; the preceeding paragraph, which is the first and primary statement of invention in the patent, says, (p. 1, line 8, etc):

> "My invention has reference to improvements in the method of and apparatus for recording *and reproducing sounds*—"

The method of reproducing sound, referred to, is made an important claim of the patent, to wit, claim 5, while the apparatus is made a most important claim in claim 35.

The Petitioner would apparently have the Court believe, from this statement, that the main invention was one of *recording*, and that all the other features had reference to the construction of *details*, which is manifestly not so.

While the method of recording may be one of the features of the patent, the method of and apparatus for reproducing, such as claimed in claims 5, and 35 are the most essential features of the patent. **The specific constructions of recording and reproducing sound boxes, shown**

in Figs. 4 to 7 of the home patent (Record, p. 455) are details, and if they had been previously patented in a foreign patent, as claimed by the Petitioner, this fact could not, as herein submitted, affect the life of the principal invention of the patent, not previously patented abroad.

In the Petitioner's construction of Sec. 4887, its counsel, in his endeavor to invoke the operation of the statute in this case, has been playing with words, and contends that if "*an* invention of the home patent has been previously patented abroad, no matter how minor the part of the invention may be, the statute operates."

The statute, however, only applies to "*an invention which has been previously patented in a foreign country*". The statute does not say that if a *part* of an invention has been previously patented, the whole patent must become void. The relative pronoun "*which*," manifestly provides that only that invention or that portion of the invention which has been previously patented abroad shall expire with the foreign patent. It says "*an invention which*". Therefore, the condition precedent is that the invention which shall expire with the prior foreign patent is *the invention which has been patented* in the prior foreign patent. It is, consequently manifest that the *principal* invention of a home patent, which has never been patented in a prior foreign patent, could not expire with the prior foreign patent.

What has been said regarding the prior German patent, No. 53,622, also practically applies to the prior French patent, No. 207,090, which is shown at page 73 of Respondents' Appeal Brief, and considered on pages 71, etc., of the said brief. The French patent is for a construction of reproducing sound box, and also a construction of recording sound box, which Petitioner contends is the same as in Figs. 4 to 7 of the home patent.

RE PETITIONER'S SECOND POINT.

(Petitioner's Brief, p. 6.)

The Petitioner's second point, as well as the first and several others, is confused and misleading; it can have no application to the facts of the present case.

This question is discussed under Point Four, page 111, of the respondents' brief in the Circuit Court of Appeals.

Under this point, the Petitioner contends that the home patent expires with the legal term of a prior foreign patent to the same inventor, where the claims relied upon in the home patent include all the fundamental features of the principal invention of the prior foreign patent, and where the said claims of the home patent embody a mere modification of the principal invention of the prior foreign patent.

Even if this contention were true, the facts of the case at bar do not, and cannot, warrant the application of such a rule to this case.

The Petitioner relies for this contention upon three prior foreign patents to Berliner, viz., English patent No. 15,232, November 8, 1887 (Record, pp. 516 to 527); French patent No. 186,827, of November 8, 1887 (Record, pp. 123 to 124); and German patent, No. 45,048, of November 8, 1887 (Record, pp. 132 to 144).

For the purposes of the consideration of this point, it may be assumed that the drawings of the German and French patent illustrate the same construction as illustrated in the English patent, No. 15,232.

As found by the United States Circuit Court of Appeals, there is nothing in any of these prior foreign patents, either in the drawings, specifications or claims, which illustrates and describes the invention of the claims in controversy of the Berliner patent in suit.

In the consideration of this point, the attention of the Court is particularly called to respondents' brief on appeal, pp. 111 to 129.

The drawings of the British patent, No. 15,232, illustrate, for the purposes of this case, in Figs. 1 to 7, the same devices and constructions as shown in the drawings of the Berliner United States patent, No. 372,786, a prior Berliner patent not in suit. Figs. 8 to 16 of this British patent show, sustantially, the same device as illustrated in Figs. 1 to 9 of the Berliner United States patent, No. 564,586, filed November 7, 1887, and the description of the British patent describes these constructions illustrated.

The only drawing, Fig. 10, of No. 564,586, which in any manner illustrates the apparatus or method of claims 5 to 35 of the patent in suit **was never introduced** into the British patent, No. 15,232, and the corresponding French and German patents, but was manifestly purposely left out and entirely omitted, as well as all description of Fig. 10 and any and all description of the subject-matter of claims 5 and 35. Neither are there any claims in any of these foreign patents, of course, for the method or apparatus of claims 5 and 35 of the patent in suit, and could not be, as there is nothing in the specifications or drawings of any of these patents upon which to base such claims.

Fig. 10 of the Berliner U. S. Patent, No. 564,586, with the description thereof, was the only thing in the application for that patent, filed November 7, 1887, which had any bearing upon the claims of the patent, in suit. The U. S. Circuit Court of Appeals in the case of the Victor Talking Machine Co. *et al. v.* American Graphophone Co. (145 Fed. Rep., 350), held that the date of Mr. Berliner's invention of claims 5 and 35 of the patent, in suit, No. 534,543, was November 7, 1887, as one form of the invention was disclosed in Fig. 10 of the application for the Patent, No. 564,586, which was pending at the time the Berliner Patent, in suit, was pending and issued subsequently to the patent in suit. This disposed of the question of alleged public use

by Mr. Berliner in May, 1888, as it was thus shown, as held by the U. S. Circuit Court of Appeals, that Mr. Berliner, at the time of the alleged public use, had an application in the Patent Office pending, which illustrated and described the invention.

Fig. 10, of No. 564,586, and the description thereof was the only thing in the application for the Berliner patent, No. 564,586, as before stated, which illustrated or described the invention of claims 5 and 35 of the patent in suit.

The British patent, No. 15,232, of 1887, as well as the German and French patents for the same invention, as before stated, was made up partly of the Berliner United States patent, No. 372,786, and with a part of the drawings of the Berliner application for patent No. 564,586.

There is, however, absolutely nothing in the specification, drawings or claims of the British patent, No. 15,232, of 1887, or in the corresponding German or French patents, which illustrates or describes, directly or indirectly, the method of claim 5 or the apparatus of claim 35 of patent No. 534,543 in suit.

The only drawing, Fig. 10, and the only description of patent No. 564,586 which in any way relates to claims 5 and 35 of the patent in suit, never was a part of this British, French or German patent.

This subject is quite fully treated on pages 112 to 117 of Respondents' Appeal Brief.

The questions herein involved are mainly questions of fact; the United States Circuit Court and Court of Appeals have found the facts, and have held that Petitioner's application of the law does not apply.

Re Claim 9 of the British Patent, 15,232, of 1887.

Petitioner's counsel contends (pp. 10 and 11 of Petition), that even though Fig. 10, and the description

thereof, of United States patent No. 564,586, is not contained in the British, French or German patents, claim 9 of th British patent is substantially the same as claim 8 of the United States patent, No. 564,586, and that it is for the invention illustrated in Fig. 10.

(1.) Claim 9 of the British patent manifestly cannot relate to Fig. 10 of United States patent, No. 564,586, as there is no illustration of this figure in the British patent, or any description of any such construction. There is nothing whatsoever in the British patent upon which to base such a construction of claim 9.

(2.) The language of claim 9 of the British patent shows that the construction claimed therein relates to a combined **recorder and reproducer** such as shown in Fig. 8 thereof; the construction claimed in claim 8 of the United States patent, No. 564,586, is such a construction of **recorder and reproducer** as shown in Fig. 1 of No. 564,586. **Claim 8 of the United States patent, No. 564,586, does not relate or refer to the construction shown in Fig. 10.**

A careful reading of claims 9 of the British Patent, and 8 of the U. S. Patent, No. 564,586, show that they relate to a *combined recorder and reproducer*, and are manifestly different from claim 35, or claim 5 of the patent, in suit. Claim 9 of the British Patent and claim 8 of the U. S. Patent, are printed on pages 8 and 9 of the petition.

Claim 9 of the British patent reads as follows:

"9. In a gramophone, the combination of a sound receiving diaphragm or other sonorous body; with a pivoted stylus controlled by a diaphragm, and controlling the same, and a support adapted to carry a phonautographic record sheet or a copy of such record, in solid resisting material, traveling in the plane of vibration of the point of the stylus, substantially as described."

Claim 9 of the British patent requires, among other things, that the pivoted stylus shall be **"controlled by a diaphragm, and controlling the same."**

A pivoted stylus controlled by a diaphragm must be in a **recording** machine where the diaphragm controls or operates the stylus to record the sound waves; a pivoted stylus **controlling** the diaphragm must be in a **reproducing** machine, as the record when made pulsates the stylus point which controls or operates the diaphragm. Therefore, the use of the conjunction "and" in the terms "a pivoted stylus **controlled** by a diaphragm **and controlling** the same," indicates that the combination called for in the claim is a combined **recording** and **reproducing** machine, such as shown in Fig. 8 of the British patent. The construction in Fig. 10 of the United States patent, No. 564,586, is a **reproducer** only; it is not a combined recorder and reproducer.

The requirements of claim 9, "a *support* adapted to carry a phonautographic record sheet or a copy of such record, in solid resisting material, *travelling* in the plane of vibration of the point of the stylus," requires that the *support* shall travel or be propelled past the fixed reproducing point in the plane of vibration of the point of the stylus, in addition to the rotary movement of the plate 13, as shown in Fig. 8 of the British Pateat. (See Respondents' Brief, pp. 114 to 117, 120 to 126.) Respondents' expert shows that the word "travelling" in claim 8 of No. 564,586, refers to the "support adapted to carry a phonautographic recording surface or a copy of such record in solid resisting material."

Claim 9 of the British Patent, also requires that the support be adapted to carry both (1) "a phonautographic record sheet, or (2) a copy of such record in solid resisting material." This is a requirement that the device shall be capable of carrying both of these elements, viz., a phonautographic record sheet when the device is to be used as a recorder, or a copy of such record in solid resisting material

when the device is to be used as a reproducer. It is, therefore, clear again that the construction claimed refers to an apparatus which can be used either as a *recorder*, or a *reproducer*, such as shown in Fig. 8 of the British Patent. The apparatus, such as Fig. 10 of the U. S. Patent, No. 564,586, could not be intended to be included in this claim, as it is *not a recorder*, but can be used for *reproducing* purposes only. The device shown in Fig. 8 of the British Patent and in Fig. 1, of the U. S. Patent, is a *combined recorder and reproducer* such as claimed in claim 9 of the British Patent and Claim 8 of the U. S. Patent.

The *support* referred to in claim 9 is manifestly the *support* referred to in the specification of the British patent, pages 5 and 6, etc. (Record, pp. 520, etc.), and marked with the numeral 7, in Fig. 8 of the drawing. This support 7 is shown as a bearing for the bevelled gears 14 and 9, and as carrying the record on a flange, 10. The support 7 is positively *traveled* in a rectilinear, or straight line, by the screw threaded shaft 6 passing through the fixed nut 5, which support thus carrying the record, travels in the plane of vibration of the point of the stylus, the record or copy of the same being at the same time rotated while the support carrying it is thus traveling in the rectilinear line. This is clearly shown in Fig. 8 of the British patent described on pages, 5, 6 and 7 thereof. (Record p. 520, etc.) The flange upon which the record plate is placed, is marked 10, and the British specification states, page 6, line 30, etc., "and in the manner hereinbefore described the support 7 will receive a rectilinear motion, while the flange 10, upon bevel gear 9, *will both rotate and move in a straight line*. For every complete revolution of bevel gear 14, support 7, and bevel gear 9 with its connected flange 10, will be moved in the line of a diameter, a distance equal to the pitch of the screw threads upon the shaft 6; and it will now be understood, that if a plate 13, is fixed to flange 10, and a fixed

pencil or stylus be lightly pressed upon the plane surface of said plate, a spiral line will be drawn upon the plate."

The specification says, page 6, line 31, "the support 7, will receive a rectilinear motion—." It also says, page 6, line 33, "support 7, and bevel gear 9 with its connected flange 10, will be moved in the line of a diameter—."

This is the *support* referred to in claim 9, which is adapted to carry the record, or copy of the record, and which in operation is "traveling in the plane of vibration of the point of the stylus." In other words, is receiving the "rectilinear motion" and moving "in a straight line", or is "moved in the line of a diameter," as stated in the specification, while the record, or copy of the same, is being rotated.

This is the only logical and possible construction which can be given to this claim 9, viz.: That it is intended to cover and include the record and reproducing apparatus, such as illustrated in Fig. 8 of the British patent and in Fig. 1 of the United States patent, No. 564,586, where the support has a positive rectilinear motion, while the record carried by it is given, at the same time, a rotary motion, so that in recording "a spiral line will be drawn upon the plate," and in reproducing, the support carrying the rotating record will be, at the same time, positively traveling in a straight line in the plane of vibration of the point of the stylus.

The invention illustrated and described in Fig. 10 of the United States patent, No. 564,586, filed November 7, 1887, was expressly omitted from the British, French and German patents, filed November 8, 1887.

While it is true that the Court of Appeals, by reason of Fig. 10, and a description thereof, being in 564,586, gave Mr. Berliner, as the date of his invention of claims 5 and 35, of the patent in suit, November 7, 1887, the date of filing of the application for patent No. 564,586, yet the Court of Appeals did not give to his inven-

tion of claims 5 and 35 any earlier date than November 7, 1887. It is clear that in order to have included Fig. 10, and description thereof, in these European patents, Mr. Berliner would have to have had to have invented the invention of Fig. 10, **at least ten days or two weeks prior to November 8, 1887**, the date of filing of these applications for patents in Great Britain, France and Germany, in order to have prepared a description of the invention here, where he lived and resided, and to send it across the ocean to London, Berlin and Paris. There is nothing to show that Mr. Berliner had invented the invention shown in Fig. 10 prior to November 7, 1887, the date of filing of the United States case, and nothing to show that he had invented it at the time that the descripion and drawings for the British, French and German applications were prepared and forwarded to London, which must have been, as before stated, at least ten days or two weeks prior to November 8, 1887, the date of the foreign applications.

As Fig. 10 and description thereof were not contained in these foreign applications, it may fairly be assumed that it may not have been invented at the time that the drawings and descriptions were sent from here to London for filing these foreign cases, which must have been at least some time during the latter part of October, 1887.

The Court of Appeals never held that claim 8 of the patent, No. 564,586, or claim 9 of the British patent, was for the construction shown in Fig. 10, as might be inferred by a somewhat misleading statement contained at the top of page 11 of the Petition.

This question was raised in the Court of Appeals by the Petitioner, and the Court of Appeals refused to sustain the contention. Claim 8 cannot, therefore, be read on Fig. 10 of patent No. 564,586, but only on Fig. 1, and the only construction illustrated and described in the British patent upon which claim 9 can be read is that illustrated in Fig. 8.

It is respectfully submitted that the case of Miller v. Eagle Mfg. Co., 151 U. S., p. 186 (referred to on page 11 of the Petition), has no application to the facts of the present case. If it had any application, and if Petitioner's contention were sound, which it is not, it could merely affect the patent No. 564,586, the second patent, and not No. 534,543, the patent in suit; but as claim 8 is manifestly for a different invention, it can have no application.

The Petitioner, on page 12, again considers the case of Seaman, *et al.* v. Sellers, *et al.*, 123 U. S. 276, hereinbefore referred to, and which is fully considered in Respondents' Brief, particularly at pages 82, etc., and 104, etc.

The Petitioner contends (bottom of page 12), that both the Circuit Court and Circuit Court of Appeals "arbitrarily set aside the clear provision of Sec. 4887 as to the limitation of a home patent by a prior foreign patent and the clear provisions of Sec. 4886 as to public use or sale in this country for more than two years prior to the filing of an application for a patent—"

This statement is unwarranted. What the Courts did find in this case is that the facts did not warrant the application of Section 4887 so as to abridge the term of the claims of the patent in suit, and as to Section 4886, the facts show that there was no public use or sale in this country as to invalidate the patent under the provisions of that section. As to the question of alleged public use, see Respondent's Appeal Brief, p. 128, etc.

Re Petitioner's Third Point.

(Petition, p. 16.)

This point is discussed on page 128 of Respondents' Appeal Brief.

Judge Hazel, in sustaining the claims 5 and 35 of the patent in suit, in the case of these complainants

against the American Graphophone Co. (140 Fed. Rep., 860), held that the Franklin Institute Lecture of May 16, 1888, did not constitute a public use under the authorities, such as to invalidate the patent under Section 4886. Upon the appeal of that case, the Court of Appeals (145 Fed. Rep., 351) affirmed the Court below, but on the question of alleged public use it also held that Berliner was entitled to carry the date of his invention, of claims 5 and 35, back to November 7, 1887, the date of filing of the application for patent No. 564,586, which was pending on March 30, 1892, the date of filing of the application of the patent in suit, and that, therefore, the question of alleged public use could not arise.

This, therefore, was *res adjudicata* at the time the suit against the Leeds & Catlin Company was brought.

This would also apply to the affidavits of Martin and Wetzler, produced by the Petitioner in this case, which are manifestly at best insufficient and inadequate proof, and also to the publication in the Electrical World, August 18, 1888, which was manifestly not a public use. Nor could have been the alleged explanation of Mr. Berliner of the invention to Messrs. Martin and Wetzler, in his bedroom at the Union Square Hotel, at New York, about March 18, 1888, even if the facts alleged by Martin and Wetzler were true.

The petitioner contends again that claim 8 of the patent, No. 564,586, related to Fig. 10, and is the same as claims 5 and 35.

As shown by the decision of Judge Hazel, and also of the Court of Appeals, affirming his decision, the construction shown in Fig. 10, described in Patent No. 564,586 was not *claimed* in that application. Both the Circuit Court and the Circuit Court of Appeals have, therefore, in a finding of fact, found that claim 8, of 564,586, did not refer to, or cover, the construction shown in Fig. 10, and was, therefore, manifestly for a different construction.

This question was quite fully before the Court of Appeals in this case, as set forth in Petitioner's Appeal Brief under Point 4, Subdivision E, page 94, etc., and the Court has considered of no importance this alleged new evidence of Martin and Wetzler as to what Mr. Berliner showed them in his bedroom in August, 1888.

There is no authority for Petitioner's contention that the pending application previously filed must *claim* the invention as well as illustrate and describe it. The effect of the decisions is that if the first application contains a disclosure of the subject-matter claimed in the second application, the rule of continuity applies. Walker on Patents, states (4th Ed., p. 84.)

> "An application which described a particular invention, takes date on the date of its filing, whether or not it claimed that invention at that time."
>
> See Edison v. American Mutoscope Co., 110 Fed. Rep., 662.
>
> Graham v. McCormick et al., 11 Fed. Rep., 859.

In the latter case, it was held that the two applications should be regarded as a continuous proceeding, and that the fact that the invention was not claimed in the first application made no difference.

In the case of Smith v. Dental Vulcanite Co. (93 U. S., 486), this Court held:

> "If, then, as we think it must be held, the proceeding to obtain the patent was a continuous one from 1855 until it was granted; if the application of 1855 is not severable from the proceedings of 1864, there is no foundation whatever for the allegation that the invention was abandoned to the public, and that it was in public use or on sale for more than two years before the inventor's application."

That the Court of Appeals in the Graphophone

case, as well as in the case at bar, was right in holding that the date of invention of claims 5 and 35 of the patent in suit could be carried back to the date of filing of the prior pending application for the Berliner patent, No. 564,586, is manifest from the numerous authorities.

Robinson on Patents, paragraph 580, note 4, states:

> "That where a second application is made for part of an invention *disclosed* in a former and still pending application, the latter is a continuation of the former so far as the question of two years' public use is concerned. See Graham *v.* McCormick, 11 Fed. Rep. 859."

Also in another note under this paragraph, it is stated:

> "That when applications are continuous they take the date of the original on questions of novelty and abandonment. See Henry v. Francestown Soapstone Stove Co., 2 Bann. & A., 221."

In Volume 22 of the Am. & E. Enc. of L. (2d Ed.), page 340, in discussing the time and continuance of the use or sale prior to the date of the application of patent which will defeat the patent, it is stated:

> "In the case of successive applications which may be considered as one proceeding, the public use or sale must have existed two years before the date of the first application in order to defeat the patent."

In support of this proposition, several authorities are cited, which will now be referred to:

In Stirling Co. v. St. Louis Brewing Assn., 79 Fed. Rep., 80, the application of the patent in suit was filed June 5, 1894, and the invention was shown to have gone into public use over two years prior to that date, and the record showed that an application for patent for the same subject-matter, so far as regards the claim in con-

troversy was concerned, was filed December 22, 1893, and the Court gave to the patent in suit the benefit of the filing date of the earlier application and states:

> "On these facts I hold that, so far as regards the defense of two years' public use, the claims sued on relates back to the first application, and hence, that the defense of public use is not made out. Godfrey v. Eames, 1 Wall., 317, 325; Smith v. Vulcanite Co., 93 U. S., 486, 500; Graham v. McCormick, 5 Ban. & A., 244, 248, 11 Fed., 859."

International Tooth Crown Co. v. Richmond et al., 30 Fed. Rep., 775, heard before Judges Wallace and Shipman, is to the same effect. In this case the application upon which the patent in suit was granted, was filed December 20, 1880, and there had been a public use of the invention over two years prior to that date, but the same inventor had filed a prior application for patent on January 9, 1879:

> "Which had never been abandoned for substantially the same invention."

As in the case at bar, the first application contained some matters foreign to the subject of the second application, and the Court held that it disclosed the invention of the claims of the patent in suit, and held that:

> "Both applications are to be considered as parts of one continuous proceeding, and the two years within which the invention could not be publicly used without invalidating the patent did not begin to run until January 9, 1879. Godfrey v. Eames, 1 Wall., 317; Smith v. Goodyear, etc., Co., 93 U. S., 500; Graham v. Geneva Lake, etc., Co., 11 Fed. Rep., 138."

In another case of Howe against Newton, 12 Fed. Cas., Case No. 6771, before Justice Clifford and Judge Lowell, it was decided that two applications pending at the same time in the Patent Office, and embodying the

same invention, are continuous, and that the public use for two years prior to the date of the second application would not defeat the patent, as the date to be given the second application was, so far as relates to the defense of public use, the date of the original application.

In the case of Henry v. the Francestown Soapstone Stove Co., 2 Ban. & A., 221, and 11 Fed., Case No. 6382, it was stated that:

> "It has frequently been held that the date of filing the application on which the patent was granted is not the date on which the time of use or sales is to be reckoned, but that the time is to relate back to the date of *any* copending application."

In Bell v. Daniels, 3 Fed. Cas., Case No. 1247, it was held that where a second application was filed before abandonment of the first application, that the two years during which the invention might be used before the application without working abandonment, or in other words, public use, must be dated from the first application. It was held that where the first application, or first two prior applications, were not abandoned, that so far as the defense of public use was concerned, the date of the application upon which the patent eventually was patented dates back to the first application.

As in the case at bar, where the subject-matter of the claims in question of the second application was embraced in the first application, it was held in Graham v. McCormick et al., 11 Fed. Rep., 859, that:

> "The subject-matter of the second application was embraced in the first, and the invention now in controversy was described in the specifications and the drawings which constitute part of the first application, and we think it may be said that the continuity of the proceeding which originated in the first application was not broken up to the time when the patent for the invention in suit was granted in 1868. See also Blandy v. Griffiths, 3 Fish., 616."

In the Circuit Court of Appeals for the Eighth Circuit, in Hayes-Young Tile Plate Co. v. St. L. Transit Co., 137 Fed. Rep., 80, Judge Sanborn held as follows:

> "In cases in which the first application has not been abandoned, subsequent applications and amendments constitute a continuance of the original proceeding, and the two years' public use or sale which may avoid the patent, must be reckoned from the presentation of the first application, and not from the filing of subsequent applications or amendments. U. S. *v.* American Bell Telephone Co., 167 U. S. 224, 17 Sup. Ct. 809, 42 L. Ed. 144; Colgate *v.* Western Union Tel. Co., Fed. Cas. No. 2,995; Miehle *v.* Read, 96 O. G. 426; Thomson-Houston Electric Co. *v.* Winchester Avenue R. Co. (C. C.) 71 Fed. 192, 73 O. G. 2155; Godfrey *v.* Eames, 1 Wall. 317, 17 L. Ed. 684; Smith *v.* Goodyear Dental Vulcanite Co., 93 U. S. 486, 23 L. Ed. 952; Cain *v.* Park, 14 App. D. C. 42, 86 O. G., 797, 798; *Ex parte* Stewart, 4 O. G., 665; Stirling Co. *v.* St. Louis Brewing Ass'n (C. C.), 79 Fed. 80; Dederick *v.* Fox (C. C.), 56 Fed. 714, 717; Ligowski Clay-Pigeon Co. *v.* American Clay-Bird Co. (C. C.) 34 Fed. 328, 333."

The attention of the Court, in passing, is here called to a misleading and unwarranted statement which occurs in several places in the Petition (p. 121), where it is stated that Mr. Berliner, in the prosecution of the Werner Suess-Canadian application, filed May 5, 1891, "asserted under oath" that Werner Suess was the inventor of the subject-matter of claims 5 and 35 of the patent in suit. While Mr. Berliner was the assignee of Werner Suess, of the Canadian application, he nowhere made such an oath, nor is any such oath of record in this case.

Petitioner's counsel contends (Petition, p. 22) that claims 5 and 35 of the patent, in suit, are limited to details of improvement, such as illustrated in the sound boxes of Figs. 6 and 7 of the patent, in suit; this, however, is a mere argument, unwarranted in fact; the finding of the fact by

both the Circuit Court and the Circuit Court of Appeals in this suit, as well as in the Graphophone case, is unanimously to the contrary.

Manifestly, the alleged two years' prior public use, and alleged abandonment, have not been proven, and the Petitioner has absolutely failed of proof in this regard.

Re Petitioner's Fourth Point.

Under this point, the Petitioner contends that claims 5 and 35 of the patent in suit are invalid, because Berliner became the assignee of the Werner Suess application for patent filed in Canada about May 5, 1891, upon which Letters Patent of Canada, No. 41,901, were granted February 11, 1893. This was for substantially the same invention as patented to Werner Suess in the United States, No. 427,279, filed August 6, 1889, but included one or two broader claims than those contained in the Suess U. S. application. Petitioner's attorney says, on page 21, that Berliner, in this Canadian application, "asserted under oath" that this was the sole invention of Werner Suess. This is not true, as Mr. Berliner, in the Suess Canadian application, made no such oath.

Berliner's relation to the Suess swinging arm invention and the Suess application is fully shown in the following consideration of this Suess Canadian patent.

The Suess Canadian Patent Considered.

The drawings of the Canadian Patent are identical with the drawings of the Suess U. S. Patent, 427,279 (Stipulation, Record, p. 540). The specification is printed on pages 157 to 168 of the Record. It states:

> "My invention has reference to improvements in the reproducing apparatus, adapted for use in the method of recording and reproducing sounds *heretofore invented and published by Emile Berliner.*"

It will be remembered that Mr. Berliner's invention of claims 5 and 35 was "PUBLISHED," as stated in the Suess-Canadian specification, in the *Electrical World* of November 12th, 1887 (Record, p. 255), which publication was known to Mr. Suess, as he was present on May 16th, 1888, when Mr. Berliner delivered his Franklin Institute lecture in Philadelphia, describing this, his, Berliner's invention, when he, Berliner, stated, referring to the *Electrical World*, "In the description of November 12th, 1887, I advanced the idea of mounting the sounder on a carriage and rails and have the record groove itself to be the screw which was to guide the point of the stylus across the disc from periphery to centre."

Mr. Berliner then stated that this had been improved upon by Mr. Werner Suess, who was present with him there that evening, at the time of the delivery of the lecture, by pivoting the arm carrying the reproducer on a suspended rail, as illustrated, for instance in Fig. 10 of Patent No. 564,586.

This publication of the *Electrical World* of November 12th, 1887, also stated, on page 243 of the Record.—

> "If now the engraved record is rotated with uniform speed, and the stylus be held in the groove, the end of the stylus will be forced to follow the undulations of the groove, and any vibratory surface attached to the stylus will be vibrated positively in both directions in strict accordance therewith; and will therefore reproduce the exact sounds which originally produced the record."

The *Electrical World* further states (Record, p. 244), after describing one way to mount the phonautogram:

> "Another way is to mount the phonautogram on a circular wooden resonant box, which simply rotates without progressive motion, and to press an ivory point into the groove. In this case the hand which holds the ivory easily follows the groove and the point

is led along the volute of the record, and vibrates the sound box by undulatory shocks.

"This suggests the plan of mounting the reproducing diaphragm and stylus on a carriage moving on rails, and permitting the point of the stylus not only to vibrate, but also to push the carriage across the revolving disc, and thereby follow the volute of the sound record.

"Mr. Berliner believes that it is more than likely that the gramophone is destined to fulfill many of the expectations which were placed ten years ago on the phonograph, and which are partly realized by the graphophone"——

Mr. Suess, in making this statement in the specification of his Canadian application, which was sworn to by him on April 13th, 1891, specifically recognizes Mr. Berliner as the inventor of this invention which had been thus published, among other places, in the *Electrical World*, November 12th, 1887, and a description of which invention was also published in the *Journal* of the Franklin Institute in June, 1888, the lecture having been delivered May 16th, 1888. (See Record, pp. 245 to 273.) It will be noted on page 273 of the Record that at the conclusion of this interesting paper before the Franklin Institute, the well-known electrical inventor, Dr. E. J. Houston, moved a vote of thanks to Mr. Berliner "for his interesting and valuable communication."

The "main features" of the Suess Canadian relate to details of construction.

The attention of the Court is directed to this Suess Canadian application (assigned to Mr. Berliner), a careful reading of which will show that Mr. Suess did not claim to be the inventor of this broad invention, but *admitted Mr. Berliner's prior invention*, and, in effect, stated that the features of his, Suess', present invention in this Canadian application related to certain detail improvements.

Among other improvements, the specification notes,

first, that as the weight of the intensifying horn is carried by the reproducer, it should be supported and balanced, so that the recording stylus "will bear with light, but sufficient pressure upon the record tablet."

His other feature is a lazy tongs construction of frame for making the stylus travel in a straight radial line.

The means which he shows for counterbalancing is illustrated in Fig. 1 of the Suess U. S. Patent, No. 427,279 (Record, p. 446), of which the Canadian drawings are a copy. The means for making the path of the stylus travel in a straight radial line are shown in Fig. 3 of the drawings, having a lazy-tongs construction.

The specification then describes in detail the constructions illustrated in the drawings.

The specification contains no broad statement of invention whatever, and is confined to the details referred to.

Claim II, while broadly worded, if valid at all, must, in view of the admission in the specification of Mr. Berliner's invention, and in view of the statement that the main features of the Suess invention refer to certain details be narrowly interpreted. Claim II, which is the most broadly worded claim of the patent, reads as follows:

> "11. In an apparatus for reproducing sounds from a rotating record tablet, a reproducing stylus mounted to have a free movement over the surface of the record tablet, substantially as described."

The words "substantially as described," it is submitted, should be understood as limiting this claim, if it is valid at all, to the lazy-tongs construction illustrated in Fig. 3 for making the reproducing stylus travel in a straight radial line across the record tablet.

Claim 5 reads:

> "5. In an apparatus for reproducing sounds from a record tablet, the combination with a reproducer mechanism consisting of a sound conveying tube and

> a diaphragm and stylus mounted at one end of the tube, of a freely swinging supporting frame for the said reproducer mechanism, substantially as described."

In view of the statement that the main feature of the invention, other than the counterbalancing feature, was the mechanism for making the path of the stylus across the face of the record disc as nearly as practicable a straight radial line, the words of the claim, "of a freely swinging supporting frame for the said reproducer mechanism, substantially as described," evidently refer to the lazy-tongs construction shown in Fig. 3 of the drawings.

Even if it referred broadly to the pivoted swinging arm, it would not conflict with claims 5 and 35 of the patent in suit, as those claims have no such restrictions, or requirements, in them.

Claim 7 of the Canadian Patent reads:

> "7. In an apparatus for reproducing sounds from a record tablet, the combination with a reproducer mechanism consisting of a sound conveyer, and diaphragm and stylus mounted at one end thereof, of a supporting frame for the said reproducer, loosely pivoted to swing freely both laterally and vertically, substantially as described."

The same comment directed to claim 5 also applies to claim 7.

Claim 12, which need not be quoted, specifically includes "a swinging lever system," referring to the lazy-tongs construction of Fig. 3 of the drawings, as does also claim 13 include "a lever system," referring to the same construction.

It is, therefor apparent that this Canadian Patent was not intended for any broader invention than the Suess U. S. Patent, No. 427,270, and did not describe any broader invention than that patent; the Court of Appeals in the Graphophone Case, affirming the Circuit Court, held in this connection:

> "The primary object of Suess, an employee of Berliner, however, was merely to construct a suitable pivotal support for the diaphragm and stylus, so as to assist such device in its passage across the record. It is expressly stated in the specification of the Suess Patent that the invention relates to improvements in the reproducing apparatus of Berliner, and that the construction and mounting of the stylus form no part of the invention."

We submit that Judge Townsend in the Court below was right in granting the preliminary injunction, though he was apparently mistaken in his conclusion where he stated (Record, p. 325), "The Canadian Patent in terms describes and claims the broad generic invention of Berliner, covered by the claims here in suit."

Petitioner's counsel apparently bases his whole contention relative to this Suess Canadian Patent upon claim 11.

It is upon the basis of this claim, or these claims, notwithstanding the true and proper interpretation of the specification which should be given to them, Petitioner contends that the fact that these claims (interpreted as Petitioner interprets them), were inserted in the Canadian Patent, conclusively proves that, as Berliner was the assignee of this application, *Berliner thereby admitted that Suess, and not he, was the inventor of claims* 5 *and* 35.

It is respectfully submitted that there is no warrant in this Canadian patent for this assumption, but that the evidence is conclusive, as adjudicated by the Court in the Graphophone case, that Berliner was the inventor as early as November, 1887, and there is no evidence in this case to affect that decision.

The fact that Berliner subsequently applied for and secured his Canadian patent, No. 55,079, for his invention in suit, containing claims 5 and 35, corresponding in all material respects in drawings, specification and claims to the patent in suit, No. 534,543 is, we submit, further conclusive evidence that neither Berliner nor

the Canadian Patent Office considered that the Suess-Canadian patent contained his invention of the patent in suit, otherwise he would not have subsequently patented it in Canada, as he did.

The Berliner Canadian patent, No. 55,079, was applied for by him December 7, 1895, and issued February 24, 1897 (Case, pp. 330 to 333). It is admitted that this Canadian patent is identical with the patent in suit (Case, p. 333).

On page 25 of the Petition, after quoting from page 1, lines 17 to 36 of the patent in suit, it is stated by the Petitioner that, "This is the patentee's expressed declaration of the features of improvements contained in the patent, *and no other declaration whatever* of any other feature of improvements is to be found elsewhere in the patent."

That this is a very misleading statement, and not warranted by the facts, is shown by reference to the patent in suit, p. 1, lines 8, etc., where it is stated:

> "My invention has reference to improvements in the method of and apparatus for recording and reproducing sounds, the improvements being more particularly directed to the construction of that kind of sound recording and reproducing apparatus which I have called 'gramophone,'—"

The argument of Petitioner's counsel in connection therewith goes for naught.

It is apparent, from a careful reading of the patent in suit, that the patentee has expressly stated, among other things, that his invention has reference to improvements in **the method of and apparatus for reproducing sounds,** both of which he afterwards specifically claims, the method by claim 5, and the apparatus in claim 35.

The attention of the Court, as to this attempt of the Petitioner to misconstrue the patent in suit, is called

to Respondents' Appeal Brief, p. 47, etc. The statement made in the Petition, in this respect, is unfair, unwarranted and misleading.

Neither the Circuit Court nor the Court of Appeals have held that the patent included features not enumerated by Berliner, as stated at the bottom of page 25 and the top of page 26 of the Petition, but the Courts have, in their decisions, consistently followed the patent and given to it the proper, reasonable and fair construction.

The Petitioner's contention that the Suess-Canadian patent, No. 41,901, granted February 11, 1893, anticipates the patent in suit is without foundation.

As shown by the decision of Judge Hazel in the Graphophone case, affirmed by the Court of Appeals, and as shown by the Suess patents themselves, Suess merely devised certain improvements upon the Berliner gramophone in suit, and Suess never laid claim to antedating Mr. Berliner's invention in suit. As before pointed out, the Suess-Canadian patent specifically states:

> "My invention has reference to improvements in the reproducing apparatus, adapted for use in the method of recording and reproducing sounds *heretofore invented and published by Emile Berliner.*"

All this had been passed upon and decided in the Graphophone Case and was *res adjudicata*, and did not need to be again reviewed in the suit against Leeds & Catlin by the same Court.

Mr. Berliner's position was consistent, as stated in his Franklin Institute lecture of 1888, that he was the inventor of the recording and reproducing apparatus, and that Suess was the inventor of a minor improvement, to wit, the pivoted swinging arm, described and claimed in the Suess United States patent, No. 427,279.

Petitioner's contentions to the contrary are, we submit, futile and without foundation.

Re Petitioner's Fifth Point.

The Fifth Point raised by the Petitioner (Petition, p. 28) is substantially similar to that raised by the Fourth Point, just considered. The Petitioner contends, under the Fifth Point, that Berliner, in becoming the assignee of the application for the Suess Canadian patent, No. 41,901, granted February 11, 1893, filed May 5, 1891, abandoned his claim to the invention of claims 5 and 35.

This point is fully answered and considered in Respondents' Appeal Brief, under Point Seven, page 136, etc. The cases cited by the Petition do not support its proposition.

The Suess Canadian patent, in the specification and drawings, was as narrow and as restricted as the Suess United States patent, No. 427,279, which the Court, in the Graphophone case, decided was for an improvement on the Berliner invention, and not for the broad claim of the Berliner invention.

In fact, if anything, the Canadian specification even more specifically admits Berliner's broad invention, as heretofore pointed out, as it states:

> "My invention has reference to **improvements** in the reproducing apparatus, adapted for use in the method of recording and reproducing sounds **heretofore invented and published by Emile Berliner.**"

This is a broad and far-reaching statement.

It is sworn to by Suess, and if the Petitioner's contention is true, that it is acquiesced in by Berliner because he was the assignee, this statement also would naturally be acquiesced in by Berliner.

The only means shown and described in the Suess Canadian Patent for traveling the reproducing stylus in a straight radial line, is the "lazy-tongs" construction shown in Fig. 3 of the drawings. When the straight arm shown in Fig. 1 of the drawings, was used with the counterbal-

ancing weight, the reproducing stylus did not travel in a straight radial line, as shown in the Canadian specification (Record, pp. 161 and 162), where it states, fol. 483:

> "As the rotation of the tablet is continued, the convolutions of the record groove will cause the stylus to be slowly drawn across the tablet, turning the entire support of the reproducing apparatus on its pivot bearing, the said stylus moving along a *slightly curved path* over the said tablet."

Fig. 1 showed the improvement relative to the adjustable counterbalancing weight.

The only construction for making the reproducer travel in a straight radial path, is that shown in Fig. 3, with an articulated frame so arranged that the stylus will travel in the path of the straight dotted line shown in the lower portion of Fig. 3. The specification states, in describing this (Record, p. 163, fol. 488):

> "The outer ends of the links 50 are pivoted to opposing corners of an articulated frame 51, composed of links 52, of equal length, connected together at the ends by pivot pins 53, 54, 55 and 56, respectively, the pins 54 and 55 also connecting the link 50 to the frame at the points before mentioned.
>
> "The pin 56, also pivotally connects one end of a link 57 to the corresponding corner of the frame 51, the other end of the said link being pivoted to the outer end of the arm 44.
>
> "The frame 51, together with the links 50 and 57, constitutes a well-known mechanical movement, by which a curvilinear movement is converted into a rectilinear movement, provided the various links have the proper relative lengths; which is supposed to be the case in this instance, and, therefore, no detailed description of the operation thereof is deemed necessary."

If these claims 5, 7 and 11 should be broadly interpreted, as contended for, the mere fact that this Canadian

patent contains such claims could not possibly prove abandonment by Berliner of his invention of claims 5 and 35, merely because he happened to be the assignee of the application and patent.

The **specification** was **not executed, or sworn to, by Berliner,** but by Werner Suess. The fact that the application was conducted in the interests of Berliner, by reason of the assignment to him by Suess, certainly cannot be construed to operate, on such grounds as these, as an abandonment by Berliner of his invention.

Berliner had long previously placed himself indisputably upon record as the inventor of claims 5 and 35, and was so recognized by the scientific public. **The great scientific institute of this country, the Franklin Institute, recognized his invention and honored him with an invitation to address the society upon the subject in May, 1888.**

Further, the proofs in this case are conclusive that Berliner was the inventor of the invention as early as November, 1887, and he so declared himself to be such *in the presence of Suess* in his lecture of May 16, 1888, at the Franklin Institute.

Suess never controverted this proposition, but on August 16, 1889, considerably over a year after the Franklin Institute lecture, filed his application for United States patent, No. 427,279, **in which he laid no claim to being the inventor, and in which he restricted his invention to five narrow, limited claims.**

The Suess Canadian patent was filed by Suess, May 25, 1891, over a year and a half after the filing of the application for the Suess United States patent.

The Suess U. S. Patent was also assigned to Mr. Berliner *before issue*, and if Mr. Berliner regarded Suess as the inventor of claims 5 and 35, he would have had such claims incorporated in the Suess U. S. Patent, in order that this most important invention should be protected properly.

As hereinbefore shown, Berliner never did consider that the Suess Canadian Patent, of which he was the assignee, covered the invention of the patent in suit, as is manifested by the fact that on December 7, 1895, he applied for a Canadian patent, with the same drawings, description and claims as the patent in suit, No. 534,543, which Canadian patent was issued to him, No. 55,079, on February 24, 1897. (Record, p. 315, etc.)

This, we submit, is conclusive evidence that Mr. Berliner did not regard the prior Suess Canadian Patent as containing the invention of the U. S. Patent in suit, and is conclusive evidence that there was nothing in the Suess Canadian patent which was intended to convey any intention on his part, directly, or indirectly, to abandon the invention of the patent in suit.

Even if there had been an abandonment, which there was not, in Canada, this would have been no evidence of abandonment of the United States rights.

There could be no presumption of abandonment for the further reason that, as shown by the decision of the Court of Appeals in the Graphophone Case, Berliner had an application filed in the United States Patent Office, which included the invention of claims 5 and 35 of the patent in suit, long prior to the date of filing of the Suess Canadian Patent, filed May 5, 1891. I refer to Mr. Berliner's application for U. S. Patent No. 564,586, which was filed November 7, 1887, and which included Fig. 10, and a description thereof. While the said invention was not claimed in that case, Mr. Berliner was at liberty to put in such claims at any time during the pendency of the case. The Courts have properly decided that his second application, the application for the patent in suit, filed March 30, 1892, in this respect dated back to November 7, 1887, the date of filing of his other application. This of itself precludes any presumption of abandonment or estoppel, as contended for by the Petition

under the Fifth Point, as well as under some of the other points.

It is respectfully submitted that the Petitioner's contentions relative to the Suess Canadian patent are without foundation.

RE PETITIONER'S SIXTH POINT.

Under this point, the Petitioner contends that the patent in suit expired with the lapsing of the Suess Canadian Patent, which lapsed at the expiration of the six year term, by reason of the failure to pay the renewal fees. (See Petition, p. 29.)

The attention of the Court is respectfully called to the consideration of this question in Respondents' Appeal Brief —Point Eight—pages 142 to 164, and the authorities therein cited.

Even if the Suess Canadian patent had been for the same invention as claims 5 and 35 of the patent in suit —which we deny—the **term of eighteen years** of this patent, for which it was granted, has not yet expired, and the Berliner patent in suit could, therefore, not be affected.

The fact that the Suess Canadian patent lapsed on February 11, 1899, at the end of six years, by reason of the failure to pay the renewal fees, can have no effect upon the term of the Berliner United States patent, No. 534,543, in suit, under the authorities.

This Suess Canadian patent states that it was granted **"for the period of eighteen years from the date of these presents,"** as appears upon its face. (Record, p. 156.)

It is also stated in the grant:

> "The partial fee required for the term of six years having been paid to the Commissioner of Patents, this patent shall cease at the end of six years from date, unless at or before the expiration

of the said term the holder thereof pay the fee required for the further term or terms, as provided by law."

It is respectfully submitted, under the well settled authorities, that in construing Section 4887, the period of the prior foreign patent to be taken into consideration with the domestic patent, is the *longest possible term of the foreign patent;* is the period of duration expressed in the grant; or, in other words, the duration of the United States patent is fixed when the United States patent issues by the longest possible term of the foreign patent, and shall not be subject to be terminated by the occurrence or non-occurrence of certain facts which would require extraneous proof.

The attention of the Court is directed to the authorities cited in the Respondents' Brief, as noted.

It is respectfully submitted that the decision of this Court in the case of Pohl *et al. v.* Anchor Brewing Co., (134 U. S., p. 381), cited in the Respondents' Appeal Brief, (p. 145, etc.), is conclusive, and in strict accord with the respondents' contention.

Attention is also directed particularly to the decision in the case of Diamond Match Co. *v.* Adirondack Match Co. *et al.* (65 Fed. Rep., p. 803).

It is respectfully submitted that this question is too well settled to occasion any serious discussion.

Re Petitioner's Seventh Point.

Under this point the Petitioner (Petition, p. 30), contends that claims 5 and 35 of the patent in suit are anticipated by the Edison British Patent, No. 1644, of 1878.

This subject is very fully considered in Respondents' Brief, under Point Ten (p. 182 to 185). This defence was not only before the Circuit Court, and Court of Appeals, in this suit against Leeds & Catlin, but also in the suit against the Graphophone Company, and there is abso-

lutely nothing in this Edison British Patent which could be considered as an anticipation of the claims in suit.

In the case of the American Graphophone Company *v.* Leeds *et al.*, 87 Fed. Rep., 874, which was a suit for alleged infringement of the Bell & Tainter patent, No. 341,214, this Edison Patent, No. 1644, of 1878, was very much in evidence. Judge Shipman's adjudication of this patent as a reference in that case, is quite to the point here, especially as he considers Fig. 34, to which Mr. Goss, Petitioner's witness in the present case, has attached so much importance. Judge Shipman says, in referring to this Edison British Patent:

> "This patent contained some of the suggestions and sketches of various sorts and kinds which Mr. Edison had thought of or had made during his experiments upon a subject novel, intricate and scientific, which required manifold and delicate experiments, and in which he took a great interest. Some of his surmises and beliefs in regard to what could be or might be done were thrown into this patent. The defendants' expert, with manifest consciousness of the difficulties in the text, translates the language of the descriptions of Figs. 27, 34 and 37 to mean that Edison had in mind gravity reproducer, or to show that such a reproducer can be inferred from the language. These descriptions are confessedly vague, and it is confessedly different to know the interpretation which the writer placed upon some of the words which he uses."

Re Petitioner's Eighth Point.

This point raised by the Petitioner (Petition, p. 31) is a contention that the claims of the patent in suit were anticipated by the Bell and Tainter patent, No. 341,214, issued May 4, 1886.

This was one of the main alleged anticipations to the claims of the patent in suit in the suit against the American Graphophone Company. Both the Circuit Court, and

the Circuit Court of Appeals, had this defence most fully before them in that case, and after a full argument, by brief, and orally, and after most careful consideration, found the fact that this Bell and Tainter Patent did not disclose the invention of claims 5 and 35, as fully set forth in the decision of Judge Hazel in the Graphophone Case, affirmed by the Court of Appeals in a *Per Curiam*.

Mr. Berliner's invention departed widely from the Bell and Tainter graphophone shown in the patent No. 341,214, and was based on radically different lines, utilizing the vertically undulating record groove. The Bell and Tainter graphophone, of patent No. 341,214, as well as the Edison phonograph of the prior art, required, in the very nature of the devices, that the reproducing stylus, in order to be kept in engagement with the sound record in the spiral groove, should be **positively propelled by a supplemental mechanical feed screw** from the beginning of the spiral record groove to the end thereof; and as the reproducing stylus must at all times, throughout the reproduction, from the beginning to the end of the record groove, be as nearly as possible in intimate contact with the record in the groove which is being reproduced, it is necessary, as far as possible, that the spiral of the supplemental feed screw should be the same pitch as the spiral of the record groove.

Berliner, however, in his invention of the combination of claim 35, operated by the method of claim 5, produced *a radically different reproducing device, and method of reproducing*. Mr. Berliner discovered that the reproducing stylus could be acoustically vibrated and simultaneously propelled by the laterally undulating even depth record groove itself, formed in a disc of hard material, without impairing in any manner the reproduction of the sound waves, and that better and more accurate results could be obtained, among other things, in that the reproducing stylus was, in such a device, always in immediate intimate

contact with the sound record in the groove which it was reproducing, and there was no danger of skipping, or eliminating, any portion of the record groove in the reproduction, as was liable to occur in the Bell and Tainter graphophone, or in the Edison phonograph. It also enabled Mr. Berliner to dispense with the somewhat complicated auxiliary feeding screw; simplified very much the reproducing device, and allowed it to be produced at considerably less expense.

The small rubber neck or universal joint shown in the Bell and Tainter Patent, No. 341,214, referred to in the Petition, was for a different purpose, to allow the reproducing stylus to slide down the sides of the record groove to keep in contact with the record, and in a measure to prevent the stylus from jumping out of the groove, in case of any irregularity between the feed screw and the spiral of the record groove, known as "drunkenness" of the record. In the construction of the Bell and Tainter patent, however, it was not possible to feed and simultaneously vibrate the stylus through the medium of the record groove across the record, which was of the vertically undulating type, and the device could not possibly operate without the auxiliary feeding screw.

All this was most thoroughly considered in the cases before the Circuit Court and Circuit Court of Appeals, and Mr. Berliner was held to have been **the pioneer inventor** of this type of talking machine, and that there was nothing in the prior art to anticipate it, notwithstanding the hardest kind of a fight, and strongest opposition in the Graphophone Case, as well as in the Leeds & Catlin and Talkophone cases.

Re Petitioner's Ninth Point.

The Petitioner's contention, under this point, is that claims 5 and 35 of the patent, in suit, are invalid as being claims for the function of a machine.

There should be no question upon this subject, as claims 5 and 35 have been held to be patentable by Judge Hazel in the Graphophone case, and by the Court of Appeals, consisting of Judges Lacombe, Townsend and Coxe in affirming the decision of Judge Hazel in that case (145 Fed. Rep., 351), and in the Circuit Court by Judge Townsend on motion for preliminary injunction in this case against Leeds & Catlin Company, and in the suit against the Talk-O-Phone Company, and by Judges Wallace, Lacombe and Coxe, in the Court of Appeals, affirming the decision of Judge Townsend (148 Fed. Rep., 1022). Judge Lacombe, subsequently, granted the order holding the Leeds & Catlin Co. in contempt (150 Fed. Rep., p. 147), which order was affirmed by the Court of Appeals by Judges Hough and Coxe, Judge Wallace dissenting, in the contempt proceeding only.

Judge Wallace's intimation in the contempt proceedings that claim 5 "covers merely the function of the machine," and quoted on page 35 of the Petition, is mere *dicta*, and cannot effect the opinion of the Court of Appeals in which he joined in affirming the decision of Judge Townsend in the injunction proceedings against this Petitioner, the Leeds & Catlin Company sustaining the validity of both claims 5 and 35. He does not even state, in the contempt proceedings, as might be inferred from the Petitioner's statement on page 35 of the Petition, that the claim 5 is void, but merely suggests "that it is more than doubtful whether the claim (5) is not void upon its face."

(The Petitioner refers frequently throughout the brief to the certain memorandum alleged to be a copy of an oral decision of the Circuit Court of Appeals printed on pages 41 to 46 of the Petition, which is not a part of the record case, and not certified to. This, it is submitted, should not be considered, no matter which side it benefits.)

Claim 5 reads as follows:—

"5. The method of reproducing sounds from a record of the same which consists in vibrating a stylus and propelling the same along the record by and in accordance with the said record, substantially as described."

We have here the mode or method of producing something, the producing, or rather the *reproducing* of sound. This is entirely distinct from the apparatus which may be used for the purpose of carrying out this method, or mode, of reproducing sound, which apparatus may be constructed in several different ways.

The method consists in phonetically vibrating the stylus by the record undulations, and at the same time, by the same means, advancing, or propelling, the phonetically vibrating stylus across the record tablet throughout the entire length of the sound record to be reproduced.

The term "method" here is not used subjectively, or passively, as applied to the machinery operated on, but *actively*, as a method, or mode, of producing, or rather reproducing, something, to wit, sound.

As herembefore pointed out, it remained for Mr. Berliner to discover, in November, 1887, that a phonetically vibrating stylus, vibrated by and in accordance with a sound record, could be simultaneously advanced, or propelled, throughout the entire record, by using the side walls of a helical groove as the propelling means simultaneously with the communication of the phonetic vibrations, without destroying, or impairing, the phonetic vibrations of the stylus point, and consequently without interfering with the true reproduction of the sound recorded upon the record.

This new method was the result of this discovery.

The method, or art, of carrying out an invention, or discovery, does not necessarily involve any particular means for employing, or using, that method.

AUTHORITIES RE PATENTABILITY OF METHOD.

Perhaps the most pertinent and applicable cases upon the subject are the Telephone cases (126 U. S., 1). Those cases, like the present case, involved the transmission of sound. The claim in controversy in that case was the fifth claim of the Bell patent, which read as follows:

> "5. The method of, and apparatus for, transmitting vocal or other sounds telegraphically, as herein described, by causing electrical undulations, similar in form to the vibrations of the air accompanying the said vocal or other sounds, substantially as set forth."

In other words, this claim was for transmitting sound, telegraphically *by causing electrical undulations*, which undulations were similar in form to the vibration of the air accompanying the sound. Electrical undulations were caused, or produced, by the voice, or otherwise, and transmitted telegraphically on a wire to a distance. Mr. Berliner reproduced recorded sound by causing the phonetically vibrating stylus, vibrated by the record groove, to travel through the entire length of the record groove solely by the impingement of the side walls of the record grove, without destroying, or impairing, the vibrations of the stylus representing the sound waves, and thereby securing the best results by automatically maintaining *the stylus point in absolutely proper co-relation with the record in the record groove, as it traveled throughout the entire length of the record groove*, or as the entire length of the record groove traveled past the stylus point.

The fact that Bell employed electricity in the Telephone case, for causing the sound undulations, in no manner affects the applicability of the decision in that case to the facts of this case, as electricity for transmitting messages was old, the novelty consisting in Mr. Bell's method of using, or training, the electricity to his purposes.

Mr. Chief Justice WAITE, in delivering the opinion in

this case, commenting upon the case of O'Reilly *v.* Morse, 56 U. S., 15 How., 62, said:—

> "In the present case the claim is not for the use of a current of electricity in its natural state as it comes from the battery, but for putting a continuous current in a closed circuit into a certain specified condition suited to the transmission of vocal and other sounds, and using it in that condition for that purpose. We see nothing in Morse's case to defeat Bell's claim; on the contrary, it is in all respects sustained by that authority. It may be that electricity cannot be used at all for the transmission of speech except in the way Bell has discovered, and that, therefore, practically his patent gives him its exclusive use for that purpose, but that does not make his claim one for the use of electricity distinct from the particular process with which it is connected in his patent."

See also American Bell Telephone Company *v.* Dolbear, 15 Fed. Rep., 448.

We do not dispute the proposition that a valid patent cannot be obtained for a process which involves nothing more than the mere operation or function of a piece of mechanism. Any number of cases can be cited by the defendant to this effect.

As said by Mr. Justice GREER, in the case of Corning *v.* Burden, 56 U. S., 15 How., 250:

> "It is when the term 'process' is used to represent the means or method of producing a result that it is patentable, and it will include all methods or means which are not affected by mechanism or mechanical combinations. But the term 'process' is often used in a more vague sense, in which it cannot be the subject of a patent. Thus we say that a board is undergoing the process of being planed, grain of being ground, iron of being hammered or rolled. Here the term is used subjectively or passively as applied to the machinery operated on, and not to the method or mode of producing that operation, which is by mechanical means, and

the use of a machine, as distinguished from a process. In this use of the term it represents the function of a machine, or the effect produced by it on the materials subjected to the action of the machine. But it is well settled that a man cannot have a patent for the function or abstract effect of the machine, but only for the machine which produces it."

This, we think, clearly distinguishes the difference between a patentable method, which actively produces something, and the mere function of a machine, as such.

This present question in this case involves, not so much the citation of authorities as to what is a patentable process, as it does the application of the well-defined decisions of the Supreme Court of the United States, and of the United States Circuit Court of Appeals for the different Circuits, to the method before us.

It is, of course, not esential to the patentability of a process that the process should effect a *chemical* change in substances operated upon.

Melvin *v.* Potter, 91 Fed. Rep., 151.

No test which can be definitely applied to all cases to determine whether or not a process of manufacture is patentable, as such has been authoritively established.

Melvin *v.* Potter, *supra.*

In all cases where this Supreme Court of the United States, and the United States Circuit Court of Appeals, have denied the patentability of a process, as such, the invention claimed was, when analyzed, seen to be something which is subjectively, or passively, operated upon by the function of a machine, or by manual manipulation. Such a case is the celebrated case of Corning *v.* Burden, 56 U. S., 15 How., 252; also the effort to claim a principle is not patentable such as the principle and use of an element for a particular purpose, such as Morse's claim for the electric telegraph in O'Reilly *v.* Morse, 56 U. S., 15 How., 62.

In an improvement in a sewing machine by which the soles and uppers of boots and shoes could be sewed together by a particular kind of stitches, without any welt, the method was held not to be patentable.

McKay *v.* Jackson, 12 Fed. Rep., 615.

Again, a process for stiffening the heels of boots and shoes was not patentable.

Hatch *v.* Moffit, 15 Fed. Rep., 253.

So, also, the process of centering a pulley and grinding the ends of the arms, concentrically with the axis, and boring the center, and securing the rim to the spider, and grinding the face of the rim concentric with the axis of the pulley, and then grinding, or centering, the edges of the rim, was held not to be a patentable process, in an exhaustive opinion by Mr. Justice BROWN, Risdon Iron & Locomotive Works *v.* Medart, 158 U. S., 65.

The attention of the Court is called to this last mentioned case, in which the authorities are reviewed. The process in Locomotive Works *v.* Medart was unquestionably under the authorities, not a patentable process and is clearly differentiated from the method of claim 5, of the patent in suit.

We would call the attention of the Court to a number of the leading authorities, where the processes claimed were held to be patentable.

In the case of Tilghman *v.* Proctor, 102 U. S., 708, the claim was for the manufacturing of fat acids, and glycerine, from fatty bodies, by the action of water at a high temperature and pressure.

In Mowry *v.* Whitney, 81 U. S., 14 Wall. 620, the patent was sustained for an improved process for manufacturing cast iron railway wheels, by retarding their cooling by a second application of heat, until all the parts of the

wheel were raised to the same temperature, and permitting a gradual cooling.

In Cochran *v.* Deener, 94 U. S., 780, the process consisted in manufacturing flour by passing the ground meal through a series of bolting reels clothed with cloth of progressively finer meshes, and, at the same time, subjecting the meal to blasts, or currents, of air. This separated the finer flour from the impurities, so that the finer flour could be reground and rebolted.

In this latter case Mr. Justice BRADLEY defined the process as:

> "A mode of treatment of certain materials to produce a given result. It is an act or series of acts, performed upon the subject matter to be transformed and reduced to a different state or thing. * * * * The machinery pointed out as suitable to perform the process may or may not be new or patentable; whilst the process itself may be altogether new and produce an entirely new result. The process requires that certain things should be done with certain substances, and in a certain order, but the tools to be used in doing this may be of secondary consequences."

In the case of Melvin *v.* Potter, 91 Fed. Rep., 151, the process claimed was that of manufacturing linoleum floor cloth, which consists in forming a granulated linoleum composition into sheets of spongy texture, then cutting the sheets into shapes, arranging the shapes on a flexible back, and pressing them into the foundation.

Judge DALLAS in deciding this case, said, *inter alia*:

> "The question is not whether the mode of operation described and claimed by Melvin is chemical or mechanical, but whether it is in fact a process, or is merely an aggregation of mechanical functions. I find no warrant in the authorities for the assumption that, unless a chemical change be effected by a process, no patentable invention or discovery can be involved in it. It is true that in both Corning *v.* Burden and Locomo-

tive Works *v.* Medart processes involving chemical reaction were contrasted with methods which comprise nothing but successive mechanical steps to produce a merely mechanical change in the substances operated upon. In doing this, however, the courts were illustrating, not defining, the difference between a patentable and an unpatentable process."

In the case of American Fibre Chamois Co. *v.* Buckskin Fibre Co., 72 Fed. Rep., 508, Judge TAFT sustained the patentability of the process of rendering wood fibre paper soft and pliable, by moistening it with a thin water solution of gelatine, and then crumbling and pounding it, and finally drying and smoothing it; holding that it was not a mere mechanical process, or aggregation of functions within the doctrine of Locomotive Works *v.* Medart, *supra;* or within Cochran *v.* Deener, *supra.*

In case of Hake *v.* Brown, 37 Fed. Rep., 783, the patent was sustained for the process of making beveled edge cards in an opinion by Judge WHEELER (Southern Dist. of New York). The method consisted in ornamenting the edges by piling them obliquely, first, so that the slope of the pack will correspond with the desired bevel, compressing them, to hold them in that position, beveling, ornamenting and finishing the whole pack on the sloping edge, which will bevel, ornament and finish the edge of each separate card by each operation, and of successively treating the other sides, and ends of the pack in the same manner, by which means the whole pack was treated as readily as one card.

The first claim was for this *method* of treating cards, and the second for a *card* so treated.

Judge WHEELER, in deciding the case, said, *inter alia*:

"According to the evidence, bevel-edged cards were not new at the date of the orator's invention; neither was beveling in packs new; but arranging cards in oblique packs, and treating one side or end till all the cards were complete on that side or end, as if they

were one card, and treating the other side and ends successively in the same manner, does not appear by the requisite measure of proof to have been known before. By this process the packs can be grooved or embossed and ornamented in a manner to present beveled designs upon the edges of such cards which could not be produced by treating cards separately, and the making of bevel-edged cards of any design is greatly facilitated. This method seems to be ingenious and useful. Such an arrangement of mechanical operations, that produces a new and useful result, or an old result in an easier or better manner, is understood to be patentable. Cochrane *v.* Deener, 94 U. S., 789; Telephone cases, 126 U. S. 1, 8 Sup. Ct. Rep., 778. The first claim of the patent, therefore, appears to be good and valid for the method described.

"There is nothing new about the bevel-edged cards produced by this process, except that they are made in this way. They do not differ from those made in any other way, unless they do in design. The process does not inhere to the product, so that it differs from any like product made in any other way, as was the case with Cumming's invention of rubber plates and teeth, in Smith *v.* Vulvanite Co., 93 U. S., 486; or the driven well, in Eames *v.* Andrews, 122 U. S., 40, 7 Sup. Ct. Rep., 1073. The product itself here is old in the sense of the patent law, and there can be no patent for it, although produced in this new way. McCloskey *v.* DuBois, 8 Fed. Rep., 710, 9 Fed. Rep., 38; McCloskey *v.* Hamill, 15 Fed. Rep., 750. The second claim of this patent, therefore, appears to be invalid."

In the case of Kirchberger *v.* American Acetylene Burner Co., 124 Fed. Rep., 764 (Northern District of New York), the Court held that the Dolan process of burning acetylene gas was patentable, which consisted in surrounding a jet of gas with an envelope of air at the discharge orifice of the burner, for the purpose of preventing its combustion in immediate contact with the burner, and until it had been projected some distance therefrom, and also for a burner tip adapted to carry out such process.

The Court held, in an opinion by Judge RAY, *inter alia*, that:—

> "An art or operation or process is an act or series of acts performed by some physical agent upon some physical object, and producing on such object some change either of character or of condition. It is said to be so far abstract that it is capable of contemplation by the mind apart from any one of the specific instruments by which it is performed. It is so far concrete that it consists in the application of physical force through physical agents to physical objects, and can thus become apparent to the senses only in connection with some tangible instrument and object. I Rob. on Patents, Sec. 159."

The Court held that *the process did not consist in the operation of the machine, or of the burner, and therefore it was not the function of the burner.*

The Court further stated:—

> "The application of a known force to known objects in a new manner is a new art. Foote *v.* Silsby, 1 Blatchf., 445 Fed. Cas., No. 4916; Higgs *v.* Goodwin, E. B. & E., 529. An art may be either a force applied, a mode of application, or the specific treatment of a specific object, and the art must produce physical effects; but it is, of course, distinct from the instrument which it employs, but any available instrument may be employed."

In the case of Chisolm *et al. v.* Johnson, 106 Fed. Rep., 191, the following process was held to be patentable, as such, and that it was not the mere function, or result, of a machine:—

> "The improvement in the art of hulling green peas, which consists in carrying the filled pods to an elevated position, and impacting the filled pods while falling so as to sever the connections of the two half shells of the pod and [of] the peas with the pods at one operation:

> "The process of gathering and hulling green peas consisting in removing the vines from the ground with the green peas attached subjecting the vines and attached peas while green to impact and separating the hulled green peas from the refuse."

So also Chisolm *v.* Randolph Canning Co., and Chisolm *et al.*, *v.* Canastota Canning Co., 135 Fed. Rep., 815-816.

In Eames *v.* Andrews, 122 U. S., 40, the Supreme Court of the United States sustained the Green driven well patent which covered a process which consisted in the driving a tube tightly into the earth, without removing the earth upwards, to serve as a well pit, and attaching thereto a pump, thereby putting into practical use the new principle of forcing the water in the water bearing strata of the earth into a well pit, by the use of artificial power to create a vacuum.

In the case of Dayton Fan & Motor Co. *v.* Westinghouse Electric & Mfg. Co., 118 Fed. Rep., 562, it was held that a patent for a process is not invalidated by reason of the fact that such process was disclosed in the prior patent for an apparatus, where there has been no dedication of the invention to the public.

It is respectfully submitted that citation of further authorities is unnecessary, and that the method claimed in claim 5, of the patent in suit, under the authorities cited, is clearly a patentable method.

This question of alleged want of patentability of claims 5 and 35 was most fully considered and argued before the Court of Appeals, as well as in the Court below in the Graphophone case, and the claims held to be valid and patentable.

Petitioner's counsel, at the bottom of page 35, attempts also to attack claim 35, because he says, "Claim 35 includes as an element a stylus 'free to be vibrated and propelled' by the record." He contends that this

is the function of the stylus, and argues that this claim, therefore, is not patentable, which we respectfully submit is without any foundation.

Re Petitioner's Tenth Point.

The Petitioner contends (Petition, p. 36) that claim 35 is void, "as being indefinite, meaningless and claiming nothing."

This question was also fully before the Circuit Court and Court of Appeals in the Graphophone case, and decided not to be worthy of consideration.

The language of claim 35 is perfectly clear and intelligible: the word "In," at the beginning of the claim, or the words "consisting of" could have been left out, but the structure intended to be claimed is perfectly clear and intelligible as it stands.

We submit, therefore, that this objection to claim 35 is trivial, and requires no further consideration.

Re Petitioner's Eleventh Point.

The Petitioner here contends (Petition, p. 37) that if claims 5 and 35 should be so construed, in view of the Suess Canadian patent, and in view of Edison's English patent, No. 1644, of 1878, as to limit their scope so as to restrict them to the construction of sound boxes shown in Figs. 6 and 7 of the patent, Petitioner would not infringe.

There is nothing tangible shown as to how or why these claims should be so restricted, and no plausible foundation laid for such a construction.

This question has been heretofore fully considered.

The Petitioner does not deny that its machine and records are made in accordance with the construction and method of operation of claims 5 and 35, as construed by the Court.

The affidavit of H. C. Kennedy (Record, p. 60, etc.) shows that the Petitioner's machine and records in this case are identically the same, except as to some ornamentation, as the respondents' machines and records, and the same as the defendants' machines and records in the Graphophone case.

RE PETITIONER'S TWELFTH POINT.

This contention (Petition, p. 37) is, in substance, that the questions here raised are pure questions of law, and present the whole case to the Court upon final disposition on the merits, and that if *certiorari* should be granted while the decree in this suit in an interlocutory decree granting injunction *pendente lite*, the Petitioner contends that the questions presented are questions of law, and that the case should be finally disposed of on its merits, and the bill dismissed.

It is submitted, on the contrary, that there are no new questions of law presented in this case; the main questions involved were questions of fact.

It is respectfully submitted that there are no such grounds in the present case for certiorari as those which existed in the case of Harriman v. Northern Securities Co., 197 U. S., 234, referred to by counsel for Petitioner, and that certiorari should not be granted.

This is a patent suit of the usual character, involving, of course, the construction and application of statutes, but these statutes have been construed again and again by this Honorable Court, as well as by the Court of Appeals, and the construction given to them by the Circuit Court and the Circuit Court of Appeals in this case, as well as in the Graphophone case, is a proper construction in accordance with the well-settled decisions.

The questions involved were mainly questions of fact, as to whether the facts of the case at bar were

such as to bring the case within the statutes Secs. 4886 and 4887, and the Courts have very properly decided that they were not. This, practically, is all there is to this case.

This is clearly not such a case as to warrant the interposition of this Court in granting the petition for Writ of Certiorari.

See Forsyth *v.* Hammond, 166 U. S., 504.

It is respectfully submitted that a Writ of Certiorari should not be granted in a suit of this character on interlocutory decree for preliminary injunction. If the petition should be granted, and this Court after argument on the merits decide in favor of the respondents, affirming the Courts below, the Leeds & Catlin Co. would have the right to require the complainant to go to final hearing, to give the defendant an opportunity to put in its defense more fully, and thus the litigation prolonged unnecessarily for an indefinite period.

The Petitioner, the defendant, now has the opportunity in the Circuit Court to put in a full defense, if it has such, and should the Circuit Court and the Court of Appeals again decide against the defendant, it would have an opportunity then to come before this Court with a Petition for Certiorari, after the case has been fully heard upon its merits, if any grounds it should have for such Petition.

RE PETITIONER'S THIRTEENTH POINT.

Under the Thirteenth Point, the Petitioner has printed in the Petition (pp. 41 to 46) what is styled "the oral decision of the Circuit Court of Appeals."

It is respectfully submitted that this so-called oral decision of the Court of Appeals is not part of the record, is entirely unofficial, and should not be considered, whether it be favorable to the Petitioner or to the Respondent, as it is not part of the record.

RE PETITIONER'S FOURTEENTH POINT.

This point was one which was considered in the Court of Appeals, but, as stated in the Petition (p. 46), is now abandoned and not urged here.

CONCLUSION.

It is respectfully submitted, for the reasons hereinbefore stated, that the Petition for Writ of Certiorari should be denied.

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May 11, 1907.

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JAN 8 1909
JAMES H. McKENNEY,
CLERK.

Supreme Court of the United States.

OCTOBER TERM, 1908

No. 80.

LEEDS & CATLIN COMPANY,

Petitioner,

against

VICTOR TALKING MACHINE COMPANY and UNITED STATES GRAMOPHONE COMPANY,

Respondents.

PETITIONER'S BRIEF IN SUIT FOR INJUNCTION.

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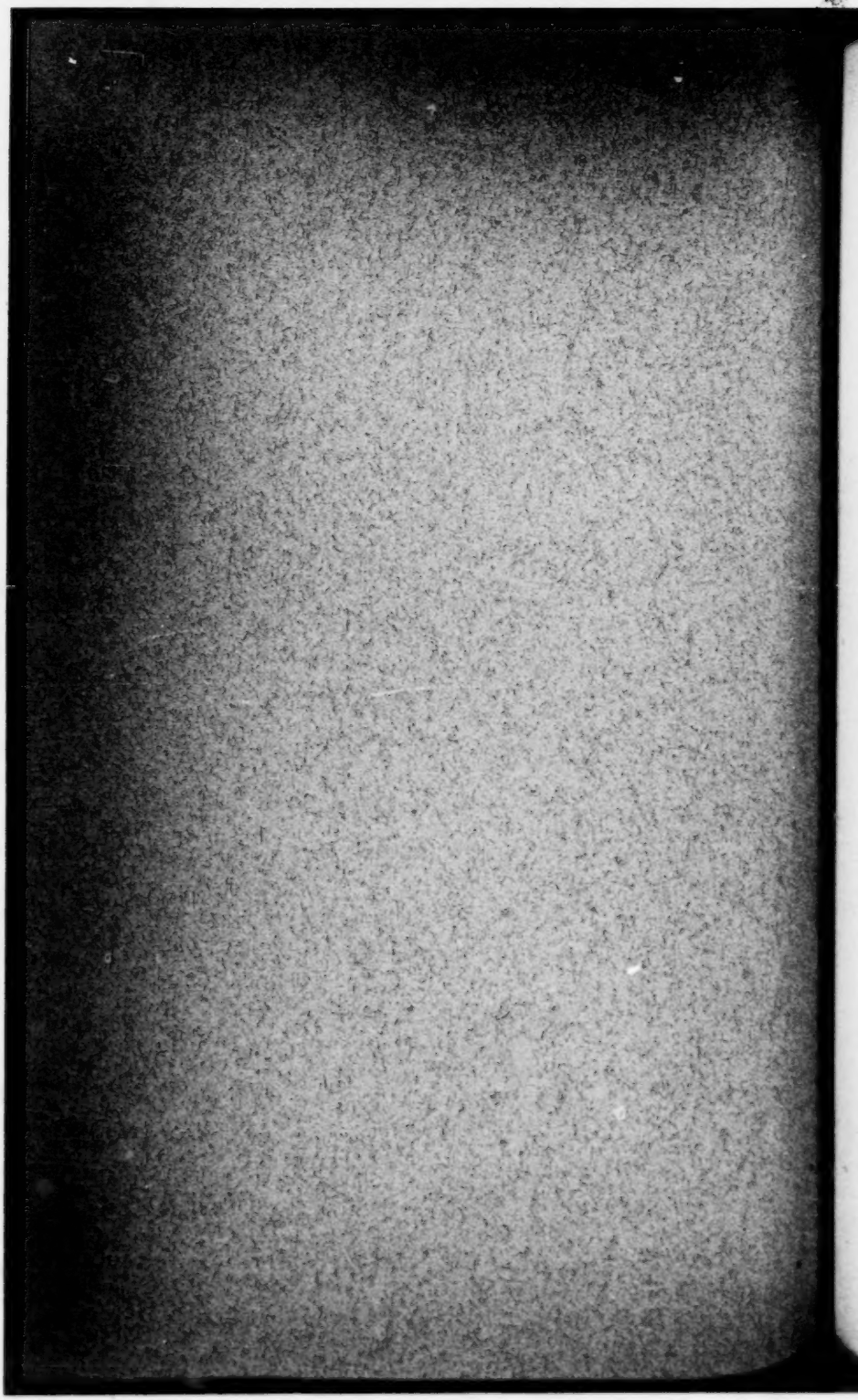

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Supreme Court of the United States.

LEEDS & CATLIN COMPANY, Petitioner, vs. VICTOR TALKING MACHINE COMPANY and United States Gramophone Company, Respondents.	October Term, 1908. No. 80.

PETITIONER'S BRIEF.

Statement.

This cause comes here on writ of *certiorari* to the United States Circuit Court of Appeals for the Second Circuit.

The petition for the granted writ of *certiorari*, being No. 742 of the October Term, 1906, set forth that the precise questions involved in this suit, which is a patent suit in equity, have never been decided by this court and are of such importance and of such general application that they should be considered and decided by this court (petition for writ of *certiorari*, p. 2). The petition furthermore set forth that the record presented the whole case to the Circuit Court and to the Cricuit Court of Appeals "in such wise that it might properly have been finally disposed of in terms by its decree, in accordance with the well settled rule upon that

subject" (197 U. S., 286); and that, although the decree for injunction was an interlocutory decree (T., p. 328) made upon a motion for an injunction *pendente lite*, this court, under the decision in *Harriman* vs. *Northern Securities Co.*, 197 U. S., 284,286, had jurisdiction to review the decision of the Circuit Court of Appeals, which had practically finally disposed of the case in favor of the complainants, and to do what the Circuit Court of Appeals might and should have done, namely, *finally dispose of the case by a direction to the Circuit Court to dismiss the bill* (petition for writ of *certiorari*, pp. 37-40).

It was shown by the petition (p. 38) that, during the pendency of this suit, another suit brought by the same complainants upon the same patent and in the same court against another defendant, the American Graphophone Company, was brought to final hearing and a decree finding infringement and granting an injunction with reference to claims 5 and 35, here in controversy, of patent No. 534,543, of February 19, 1895, to Berliner (T., p. 452), was entered by Judge Hazel (140 Fed. 860) in October, 1905, and affirmed by the Circuit Court of Appeals for the Second Circuit in March, 1906 (145 Fed. 350), so that no useful purpose would be served by compelling this petitioner, at great expense and long delay, to raise, again in the same Circuit Court and again in the same Circuit Court of Appeals, the very questions upon which each of those courts had already finally passed.

Under familiar practice this petitioner was not free to argue, either in the Circuit Court or in the Circuit Court of Appeals, any of the questions previously decided in the said suit against the American Graphophone Company. However, *new de-*

fences of the first importance, *presenting pure questions of law*, were raised in this suit in addition to the defences raised in the prior suit.

Before presenting the questions here involved and the manner in which they are raised, a word of comment is necessary upon the prior suit in order that this court may determine what *weight, if any*, is to be given to the decision in that suit, and how far the decision in that suit should have been controlling upon the courts below in the decision of this suit in respect to such evidence and such defences as were presented in that suit as well as in this suit.

On December 8, 1903, the Victor Talking Machine Company, complainant herein, and the American Graphophone Company entered into an agreement, which is set forth at pages 224-229 of the record herein. Under that agreement it was provided that the parties thereto should do all in their power to speed to final hearing and final adjudication all suits brought by the one party against the other party upon their respective patents (T., p. 225, fol. 675; p. 226, fol. 678). The agreement further provided that if in any such suit the defence should *fail*, in that event the *defeated* party should receive a license under the patent, thus sustained, of the other party (T., p. 226, fol. 676; p. 227, fol. 679); and that thereupon the contracting parties should proceed jointly to enforce against their competitors the patents sustained in the litigations between themselves (T., p. 226, fols. 677-678).

The agreement mentioned the patent here in suit, No. 534,543, of February 19, 1895, to Berliner, as one belonging to the Victor Company, and patent No. 688,739, of December 10, 1901, to Jones, as one

belonging to the Graphophone Company. The result of securing decisions of the courts broadly sustaining these two patents would be to give to the contracting parties a monopoly of the disc talking-machine business, and it obviously became, as a result of the agreement, the interest of the contracting parties to have the said patents sustained in the litigations between themselves, because, as stated, the defeated party was to receive a license under each patent sustained against it.

It is not surprising to find that the Berliner patent *was* sustained in the suit of these complainants against the American Graphophone Company (140 Fed, 860, affirmed, 145 Fed, 350; and T., pp. 63, 73), and that the Jones patent *was* sustained in the suit of the American Graphophone Company against the Victor Company's licensee, the Universal Talking Machine Mfg. Co., (151 Fed. 595), which suit was defended by the Victor Company through its present counsel, Horace Pettit, Esq. (T., p. 216, fols. 648-659).

That the American Graphophone Company *was* interested in sustaining the Victor Company's Berliner patent and that the Victor Company *was* interested in sustaining the Graphophone Company's Jones patent is *matter of record* (*infra*, pp. 5-6).

Upon the sustaining of the Berliner and Jones patents, in accordance with the above stated provision of the agreement, motions for preliminary injunction were at once brought against this petitioner, the Leeds & Catlin Company, in suits which had been previously brought upon said patents and kept pending while the Victor and Graphophone Companies were prosecuting their litigations between themselves in order to sustain the patents. The *new defences* thereupon

adduced by this petitioner, through its counsel, were of such weight and importance that this court granted its writ of *certiorari* to review the decisions in this suit based upon the Berliner patent, and Judge Hough, on August 25, 1908, held the Jones patent to be void (Fed.) on new evidence, adduced by this petitioner when the suit based on that patent was argued before him at final hearing.

When the American Graphophone Company ascertained the nature of the new defences interposed by this petitioner in this suit upon the motion for preliminary injunction heard by Judge Townsend, its counsel, immediately after the argument of the motion and before Judge Townsend had had an opportunity to examine the questions and render his decision thereon, seized upon this petitioner's new defences, to the prejudice of this petitioner, and presented especially the new defence based upon the Berliner-Suess Canadian patent (T., p. 155), to the Circuit Court of Appeals upon a motion to re-open the suit upon the Berliner patent against the American Graphophone Company, and for leave to file a bill in the nature of a bill of review. The Circuit Court of Appeals held that the American Graphophone Company had been guilty of *laches* in presenting its defences and denied the motion (145 Fed. 351). Reference to page 9 of the printed papers of the American Graphophone Company upon said motion shows that its counsel, Mr. Mauro, then stated, in an affidavit verified by him, as follows;—

> "It is *to the interest of the defendant*, the American Graphophone Company, that the (Berliner) patent in suit *should be sustained*

and enforced against other manufacturers of talking machines."

In like manner, in the suit of the American Graphophone Company against this petitioner, upon the Jones patent, it appeared that the expert of the Victor Company, Mr. Hunter, refused to carry out his agreement to testify as an expert on behalf of this petitioner and gave the following reason for his refusal;—

> "The fact is, that my relations to the Victor Talking Machine Company are such that I could not act in any suit that would directly or indirectly affect their interests and of course you know that *after the determination of the suit on the Jones patent in favor of the Graphophone Company, the Victor Company became licensees and their relations are such that adverse decision against the Jones patent at the present time would materially affect their business interests*" (see page 678, fol. 2034 of defendant's record in suit of American Graphophone Co. v. Leeds & Catlin Co. on said Jones patent, now in the Circuit Court of Appeals for the Second Circuit).

Reference to said agreement of December 8, 1903, between the Victor and Graphophone Companies, shows that *apparently* royalty was to be paid for the license to be received by the defeated party under the sustained patents, but the copy of the agreement presented to the court by *these complainants* in the suit against the American Graphophone Company upon said Berliner patent (see p. 151, record on appeal of 145 Fed. 350), which is the same as the copy contained in the record in this suit (T., p. 224), shows that, instead of stating an amount of royalty to be paid, *blank spaces*

for the amount of royalty were left in the agreement. When, in the suit of the American Graphophone Company against this petitioner upon said Jones patent, counsel for the American Graphophone Company was called upon to produce the *original* copy of said agreement of December 8, 1903, *in order to determine whether payment of royalties had actually been contemplated*, said counsel refused to produce the original agreement (see p. 157, fol. 665 of complainant's record; p. 686, fol. 2058 of defendant's record, in said suit on the Jones patent now in the Circuit Court of Appeals for the Second Circuit).

Because, as above shown, the American Graphophone Company was interested in sustaining, and not in overthrowing, the Berliner patent here in suit; because, as the Circuit Court of Appeals said, that company was guilty of laches in presenting its defences; and because the evidence before the court in this suit not only presents important defences not raised by the evidence in the prior suit, but also supplements and strengthens the defences presented in that suit, but little, if any, weight is to be given to the decision in the prior suit, resting as it does upon an *imperfect record* and an *incomplete presentation* of the defence to the patent.

In the Circuit Court and in the Circuit Court of Appeals this petitioner was bound, under the practice prevailing in the Second Circuit, by the decision upon the evidence in the prior suit. *In this court, however, all the questions involved are, for the first time, presented together for decision upon the merits*, this court being at liberty to consider *all* the evidence, to re-examine *all* the defences and to render its decision uncontrolled by the ac-

tion of the lower courts in any prior suit, no matter what the degree of good faith may have been with which the prior suit was conducted by the parties in the lower courts.

Succinct Statement of the Questions Here Involved and the Manner in Which They Are Raised.

The patent in suit No. 534,543, of February 19, 1895, to Berliner, is to be found at page 452 of the record. It was applied for on March 30, 1892. Claims 5 and 35 of the patent, the only claims involved in the prior suit (140 Fed. 860 and 145 Fed. 350) and in this suit (see decree, T., p. 328), are as follows;—

> "5. The *method* of reproducing sounds from a record of the same which consists in *vibrating* a stylus and *propelling* the same *along* the record *by* and in accordance with *the said record,* substantially as described.
>
> "35. IN a sound reproducing apparatus consisting of a *traveling tablet* having a sound record formed thereon and a *reproducing stylus* shaped for engagement with said record and *free to be vibrated and propelled* by the same, substantially as described."

Petitioner contends (*a*) that said claims 5 and 35 were *void* when the patent in suit was issued; and (*b*) if not void, that the patent in suit and said claims thereof had *expired* with prior foreign patents, before this suit was begun on July 12, 1904 (T., p. 11) and before the decree for injunction was entered on May 2, 1906 (T., p. 329); and (*c*) that the patent in suit and said claims thereof are *not infringed.* The grounds of petitioner's

contentions, *which raise pure questions of law*, are the following;—

1. That claims 5 and 35 of the patent in suit are *void* because they are claims for the *functions* of a machine. (See discussion and authorities cited, *infra*, p. 45, under Point One).

2. That claim 35 of the patent in suit is *void* because it is indefinite and meaningless and *claims nothing*. (See discussion and authorities cited, *infra*, p. 64, under Point Two).

3. That claims 5 and 35 of the patent in suit are *void*, because *anticipated* by British patent No. 1644 of 1878 to Edison (T., p. 472). (See discussion and authorities cited, *infra*, p. 65, under Point Three).

4. That claims 5 and 35 of the patent in suit are *void*, because *anticipated* by U. S. patent No. 341,214, of May 4, 1886 to Bell & Tainter (T., p. 387), or by British patent No. 6027 of May 4, 1886 to Johnson for the same Bell & Tainter invention (T., p. 488). (See discussion and authorities cited, *infra*, p. 80, under Point Four).

5. That claims 5 and 35 of the patent in suit are *void*, because *anticipated* by Suess, as shown (*a*) by U. S. patent No. 427,279 of May 6, 1890 to Suess, *assignor to Berliner* (T., p. 446); (*b*) by Canadian patent No. 41,901 of February 11, 1893 to Berliner, *as assignee of Suess* (T., pp. 155-175); and (*c*) by Be. er's lecture before the Franklin Institute of May 16, 1888, acknowledging Suess to be the inventor (T., pp. 245-273, especially page 270, fol. 809 and page 269, figure of "reproducing apparatus, May, 1888"). The drawings of said Suess-Berliner Canadian and United

States patents being identical, the drawings of the United States patent are to be used in connection with the Canadian patent (stipulation, T., p. 541, fol. 1621). (See discussion and authorities cited, *infra*, p. 96, under Point Five).

6. That the patent in suit and claims 5 and 35 thereof *expired* on November 7, 1902, before this suit was begun, with the expiration of the legal term of the prior German patent to Berliner No. 53,622 of November 20, 1889 (T., p. 150). (See discussion and authorities cited, *infra*, p. 114, under Point Six).

7. That the patent in suit and claims 5 and 35 thereof *expired* on July 19, 1905, before the decree for injunction was entered, with the expiration of the legal term of the prior French patent to Berliner, No. 207,090 of July 19, 1890 (T., p. 126). (See discussion and authorities cited, *infra*, p. 152, under Point Seven).

8. That the patent in suit and claims 5 and 35 thereof *expired*, before this suit was begun,

(*a*) on November 8, 1901 with the expiration of the legal term of the prior British patent to Berliner, No. 15,232, of November 8, 1887 (T., p. 516);

(*b*) on November 7, 1902 with the expiration of the legal term of the prior German patent to Berliner, No. 45,048 of November 8, 1887 (T., p. 132); and

(*c*) on November 8, 1902 with the expiration of the legal term of the prior French patent to Berliner, No. 186,827 of November 8, 1887 (T., p. 123).

The drawings of said British, German and French

patents of 1887 to Berliner being identical, the drawings of the English patent are to be used in connection with the German and French patents (stipulation, T., p. 540, fol. 1620). (See discussion and authorities cited, *infra*, p. 164, under Point Eight.)

9. That the patent in suit and claims 5 and 35 thereof *expired* before this suit was begun, on February 11, 1899, with the expiration of the legal term of the prior Canadian patent to Berliner, assignee of Suess, No. 41,901, of February 11, 1893 (T., pp. 155-175; for the drawings of Canadian patent see the identical drawings of U. S. patent No. 427,279, T., p. 446, and stipulation, T., p. 541, fol. 1621). (See discussion and authorities cited, *infra*, p. 188, under Point Nine).

10. That claims 5 and 35 of the patent in suit are *void*, because of the *public use* in 1888 in this country of the alleged invention thereof, more than two years prior to the filing of the application for the patent in suit on March 30, 1892. (See discussion and authorities cited, *infra*, p. 215, under Point Ten).

11. That claims 5 and 35 of the patent in suit are *void*, because, if Berliner ever had any right to the alleged invention of said claims, he had *irrevocably abandoned* his right thereto before the filing of the application for the patent in suit on March 30, 1892. (See discussion and authorities cited, *infra*, p. 230, under Point Eleven).

12. That defendant has *not infringed* the patent in suit or claim 5 or 35 thereof. (See discussion and authorities cited, *infra*, p. 239, under Point Twelve).

13. That the entire matter of the patent in suit was split up by Berliner and previously patented by him in several foreign patents, by reason of which the patent in suit *expired* with the foreign patent *having the shortest term*. (See discussion and authorities cited, *infra*, p. 246, under Point Thirteen).

14. That, for the reasons stated, the bill was *without equity* and the Circuit Court *without jurisdiction* to entertain this suit in equity, by reason of which the Circuit Court erred in not dismissing the bill. (See discussion and authorities cited, *infra*, p. 249, under Point Fourteen).

15. That the decree of the Circuit Court for injunction and the order of affirmance of the Circuit Court of Appeals should be reversed with costs and the cause remanded to the Circuit Court with a direction to dismiss the bill. (See Conclusion, *infra*, p. 250).

ASSIGNMENT OF ERRORS.

The errors assigned (T., p. 534) and relied upon are as follows;—

The Circuit Court erred in the following particulars:

1. In not holding that the patent in suit, No. 534,543, expired with the prior German patent No. 53,622, of November 20, 1889.

2. In not holding that claim 5 of the patent in suit, No. 534,543, expired with the prior German patent No. 53,622, of November 20, 1889.

3. In not holding that claim 35 of the patent in suit, No. 534,543, expired with the expiration of

the prior German patent, No. 53,622, of November 20, 1889.

4. In not holding that the patent in suit, No. 534,543, expired with the prior French patent No. 207,090, of July 19, 1890.

5. In not holding that claim 5 of the patent in suit, No. 534,543, expired with the prior French patent No. 207,090, of July 19, 1890.

6. In not holding that claim 35 of the patent in suit, No. 534,543, expired with the expiration of the prior French patent No. 207,090, of July 19, 1890.

7. In not holding that the patent in suit, No. 534,543, including claims 5 and 35, expired with English patent No. 15,232, of November 8, 1887.

8. In not holding that the patent in suit, No. 534,543, including claims 5 and 35, expired with German patent No. 45,048, of November 8, 1887.

9. In not holding that the patent in suit, No. 534,543, including claims 5 and 35, expired with French patent No. 186,827, of November 8, 1887.

10. In not holding that Berliner was not the inventor of the invention set forth in claims 5 and 35 of the patent in suit.

11. In not holding that the invention of claims 5 and 35 of the patent in suit, No. 534,543, was anticipated by Werner Suess in Canadian patent No. 41,901, of February 11, 1893.

12. In not holding that Berliner had abandoned the invention claimed in claims 5 and 35 of the patent in suit, No. 534,543, before he applied for a patent therefor.

13. In not holding that Berliner had abandoned the invention claimed in claims 5 and 35 of the patent in suit, No. 534,543, before the patent was issued.

14. In not holding that claims 5 and 35 of the patent in suit, No. 534,543, should be limited to Berliner's improvements in the details of construction of his reproducer.

15. In not holding that defendant's devices do not infringe claims 5 and 35 of the patent in suit, No. 534,543.

16. In not holding that the patent in suit, No. 534,543, expired February 11, 1899, with the expiration of the term of six years for which the prior Canadian patent, No. 41,901, of February 11, 1893, was granted.

17. In not holding that claims 5 and 35 of the patent in suit, No. 534,543, were anticipated by English patent No. 1644, of 1878, to Edison.

18. In not holding that the patent in suit, No. 534,543, was not fairly in controversy in the prior suit between these complainants and the American Graphophone Company, and that the adjudication in that suit formed no proper basis for a preliminary injunction.

20. In not holding that the patent in suit, No. 534,543, had expired before the commencement of this suit.

21. In not holding that the patent in suit No. 534,543 had expired before the making of the motion for preliminary injunction and the making of the order entered May 2, 1906, and hereby appealed from.

22. In not denying the motion for preliminary injunction.

23. In not dismissing the bill of complaint upon the hearing of the motion for preliminary injunction.

24. In not holding that claims 5 and 35 of the patent in suit, No. 534,543, are and always have been invalid by reason of more than two years public prior use in the United States by Berliner before the date of the filing of his application therefor.

25. In not holding that claims 5 and 35 of the patent in suit, No. 534,543, are and always have been invalid by reason of more than two years public prior use in the United States by T. Commerford Martin before the date of the filing of the application therefor.

26. In not holding that in view of the state of the prior art claim 5 of the patent in suit, No. 534,543, is void for lack of invention.

27. In not holding that in view of the state of the prior art claim 35 of the patent in suit, No. 534,543, is void for lack of invention.

28. In not holding that in view of the prior art, claim 5 should be limited to a method of reproducing sounds wherein the stylus is vibrated substantially as described in the specification of the patent in suit, No. 534,543, and shown in figures 6 and 7 thereof.

29. In not holding that in view of the prior art, claim 35 of the patent in suit, No. 534,543, should be limited to a sound reproducing apparatus having a reproducing stylus free to be vibrated sub-

stantially as described in the specification and shown in figures 6 and 7 thereof.

30. In not holding that claim 5 of the patent in suit, No. 534,543, is void as being for the function of a machine.

31. In not holding that claim 35 of the patent in suit, No. 534,543, is void as being for the function of a machine.

32. In not holding that claim 35 of the patent in suit, No. 534,543, is void as being indefinite, meaningless and claiming nothing.

33. In enjoining the manufacturing and selling of an article under claim 5 of the patent in suit, No. 534,543, which is limited to a method.

34. In granting the order for preliminary injunction.

Brief Statement of the Prior Art, of Berliner's Early Domestic and Foreign Patents, and of the Relation Thereto of Claims 5 and 35 of the Patent in Suit. Error of the Courts Below in Selecting One Feature as the Principal Invention of the Patent in Suit.

(a.) The prior art and the relation of Berliner's work thereto.

The *recording* of sound in permanent characters and the *reproduction*, by suitable mechanism, of sound so recorded were invented by Edison in 1877 and patented in U. S. patent No. 200,521, of February 19, 1878 (T., p. 334) and British patent No. 1644 of April 24, 1878 (T., p. 472) to Edison. *These are the two fundamental patents of the art.*

In 1885, and prior thereto, Bell & Tainter made an important improvement upon Edison's invention, consisting in the substitution of a wax-like material for Edison's tin-foil spread upon the surface of a wax-like material, as the material in which to record, by cutting or engraving as distinguished from indenting, the permanent characters constituting the sound record. For this improvement Bell & Tainter obtained U. S. patent No. 341,214, of May 4, 1886 (T., p. 387) and British patent No. 6027 of May 4, 1886 to Johnson (T., p. 488).

Prior to Edison and as early as 1857, Scott invented the phonautograph (T., p. 244 and p. 417, lines 87-97), an instrument which recorded sound in a *non-resisting* material, such as lampblack, a material incapable of causing a reproducing stylus to be vibrated, as distinguished from the *resisting* materials above mentioned, capable of causing a reproducing stylus to be vibrated, employed by Edison and by Bell & Tainter. Because of the non-resisting character of the recording material employed by Scott in 1857, sound could not be reproduced from Scott's phonautographic record.

When Berliner, in 1887, entered the field of recording and reproducing sound, *the art was old*. Scott had *recorded* sound by the *lateral* vibrations of a recording stylus in a groove of *even depth* traced in a non-resisting material such as lampblack. Edison had recorded sound not only by the *lateral* but also by the *vertical* vibrations of the recording stylus indenting a resisting material, such as tin-foil spread upon the surface of a wax-like material, and Bell & Tainter had further improved the art by recording, by cutting or engraving, directly in a wax-like material. Edison, moreover, had described the *duplication*, or multiplica-

tion of copies, of original sound records by the well known *stereotype* and *electrotype* processes.

In U. S. patent No. 200,521 of February 19, 1878, Edison described the *stereotype* process as follows (T., p. 336);—

> "The record, if it be upon tin-foil, may be *stereotyped* by means of the plaster-of-paris process, and from the stereotype *multiple copies* may be made expeditiously and cheaply by casting or by pressing tin-foil or other material upon it. This is valuable when musical compositions are required for numerous machines."

In British patent No. 1644 of 1878, Edison described the *electrotype* process as follows (T., p. 472, lines 17-22);—

> "where a *matrix* has been made of steel or iron by *electrotype* deposit, or otherwise, upon the phonogram it may be hardened and used for impressing a sheet or roller of metal, and thereby *the original phonogram can be reproduced indefinitely* in metal that may be hardened and used for any reasonable length of time to utter the sentence, or words or sounds phonetically."

In U. S. patent No. 200,521, of February 19, 1878. Edison stated that he did not confine himself to recording sound by indentations made by the *vertical* vibration of the recording stylus, since, he said, the record might be made "in a sinuous form" by causing the recording stylus to vibrate *laterally* or "to the right and left of a straight line" (T., p. 336, bottom of first column and top of second column). The record made by the lateral vibrations of the recording stylus Edison termed a "*zigzag*" record in British patent No. 1644 of 1878 (T., p. 473, line 55) and said that (T., p. 473, line 57);—

> "the reproduction of the phonogram from a

> matrix or copy in relief of an original phonogram may be made upon a belt, roller, cylinder, *plate* or other convenient surface."

The term "zigzag," applied by Edison to a record having a *laterally* undulating groove of *even depth*, is the term which has been used ever since, and is used to-day, to designate such a record.

In the above mentioned litigation over the Jones patent of the American Graphophone Company, held by Judge Hough, in the suit against this petitioner, to be void, as above stated (*supra*, p. 5), Judge Hazel and the Circuit Court of Appeals, upon a review of the art, found that (151 Fed., 596; 145 Fed. 636);—

> "The prior Edison British patents referred to phonograms 'in the form of a *disk*, * * * and the marks are to be either in straight lines, spiral, *zigzag*, or in any other convenient form,' and stated that 'the *reproduction* of the phonogram from a *matrix* * * * may be made upon a * * * plate" (T., p. 473, line 53).

Not only were sound records having a laterally undulating or a vertically undulating groove, and the process of duplicating the same, old, before Berliner entered the field in 1887, but the *machines* for recording such sound records and for reproducing sound therefrom *were also old* and had been described and patented by Edison and by Bell & Tainter as well as others.

The court will understand, as explained by the evidence, hereinafter referred to, that in a machine employed for *recording* a sound record, it is *necessary that the vibrating, recording stylus be fed* across the surface of a record-tablet rotating about a fixed axis, by some feed mechanism, such as a feed-screw, or that the vibrating, recording stylus

be fixed and the axis of the rotating record-tablet be similarly fed or moved with reference to the fixed stylus, in order that the stylus may record the record in a *spiral* line either upon the surface of a disc or upon the surface of a cylinder. In a machine employed for *reproducing* sound from a record, *such auxiliary means,* as a feed-screw, *are not necessary,* in the case of a record-tablet rotating about a *fixed* axis, since the spiral groove constituting the sound record serves as a screw and will, by itself, feed or guide the reproducing stylus as the stylus moves and vibrates along and within the spiral groove. Moreover, in a machine for reproducing sound, employing a record-tablet rotating about a *moving* axis, the spiral groove of the record will also guide and vibrate the reproducing stylus in like manner. *As hereinafter pointed out, this difference in machines employed for recording and for reproducing sound was stated, described and patented by Edison in British patent No. 1644 of 1878 and by Bell & Tainter in U. S. patent No. 341,214, of May 4, 1886, and British patent No. 6027 of May 4, 1886* (*infra*, pp. 65, 80, Points Three and Four). In some cases the machines employed for recording were also employed for reproducing, while in others machines not adapted for recording, because of the absence of the auxiliary feed mechanism, were employed solely for reproducing.

Such being the state of the prior art when Berliner, in 1887, entered the field of recording and reproducing sound, he sought to devise, as he said (T., p. 257), some means of making a sound record which would not infringe the Edison patents of 1878 or the Bell & Tainter patents of 1886. Berliner found, in Scott's anticipating phonauto-

graphic record of 1857, a sound record made in a non-restisting material, such as lampblack, having "no perceptible resistance at all" to the point of the recording or reproducing stylus and being, therefore, incapable of causing the reproducing stylus to be vibrated and the sounds originally recorded to be reproduced. Scott's phonautographic record was, as above stated, a *zigzag* record or record of lateral undulations and uniform depth. *Berliner invented a method of utilizing Scott's record, traced in non-resisting material, by copying it in solid resisting material, capable of causing the reproducing stylus to be vibrated and thereby to reproduce the sounds originally recorded in the non-resisting material.* That such was Berliner's invention appears from his statements to that effect in several patents (U. S. patent, No. 372,786, of November 8, 1887, T., p. 417, lines 87-97; British patent No. 15,232 of 1887, T., p. 517, lines 29-34). For copying in solid resisting material his original record traced in non-resisting material, Berliner employed, among other processes, the etching process (U. S. patent No. 382,790, of May 15, 1888, T., p. 434). The recording stylus removed the non-resisting material, such as lampblack or a solution of wax, from the surface of a metal plate. Acid was then applied to the portions of the metal plate exposed by the action of the stylus and as a result of the etching action of the acid, Berliner obtained a sound record etched in metal, of which he made duplicates by the electrotype process previously described by Edison, as above stated, in 1878 (U. S. patent No. 382,790, of May 15, 1888, to Berliner, T., p. 435, lines 25-58).

For *recording* Berliner employed a machine in which the vibrating recording stylus was caused to

move across the surface of the record-tablet rotating about a fixed axis (T., p. 452), or the axis of the rotating record-tablet was caused to move with reference to the point of a fixed, vibrating, recording stylus (T., p. 526, Fig. 8), by means of a feed-screw, according to the above mentioned well known methods of the prior art employed by Scott, Edison and Bell & Tainter. This appears from a comparison of Scott's *phonautograph* of 1857 (T., p. 244), or Edison's *phonograph* of 1878 (T., p. 334, Fig. 2, and pages 484-485, Figs. 1-15), or Bell & Tainter's *graphophone* of 1885 (T., p. 387, Figs. 1 and 2, and p. 488, Figs. 12 and 13) with Berliner's *gramophone* (T., p. 452, Fig. 1; p. 526, Figs. 1 and 8).

For *reproducing* sound from the record Berliner employed machines in which the reproducing stylus was guided or fed and vibrated by the record-groove, *either with or without the aid of a feed-screw, in precisely the manner disclosed by the Edison British patent of 1878 and by the Bell & Tainter United States and British patents of 1886.* This appears from a comparison of Edison's phonograph of 1878 (T., pp. 484, 485, Figs. 1-15 and p. 486, Figs. 34 and 37), and of Bell & Tainter's graphophone of 1885 (T., p. 387, Figs. 1, 2 and 8; p. 388, Figs. 12 and 13; p. 389, Fig. 14; p. 512, Figs. 1, 2 and 8, and 12 and 13; and p. 513, Fig. 14), with Berliner's gramophone of 1887 (T., p. 416, Fig. 1; p. 463, Fig. 1; p. 465, Fig. 10, and p. 526, Figs. 1 and 8). As hereinafter more fully shown (*infra*, pp. 65-230, Points Three to Eleven), *whatever improvements Berliner made, with reference to machines for recording or reproducing sound, consisted of improvements upon special features only*

of the recording and reproducing machines of the prior art, operating as above described.

Berliner's contribution to the art of recording and reproducing sound, constituting his *principal or basic* invention, consisted in copying in solid resisting material Scott's phonautographic record of lateral undulations and uniform depth traced in non-resisting material, thereby producing, in a new way, a record, *which was old*, capable of use for the reproduction of sound in a sound reproducing apparatus operating in a well known manner of the prior art. The Circuit Court of Appeals has held that Berliner's basic invention has been discarded (151 Fed. 595).

In the prior suit against the American Graphophone Co., upon claims 5 and 35 of the Berliner patent here in suit, Judge Hazel found (T., p. 64; 140 Fed. 860);—

> "At the date of the invention in suit it was not new to record sound and articulated words and *reproduce the same by suitable mechanical agencies.*"

As stated above, and as more fully shown under Points Three and Four (*infra*, pp. 65, 80), the movement of the *reproducing* stylus across the face of a rotating spiral record, without any auxiliary feeding mechanism whatever and solely by reason of the control of the record-groove over the stylus point, was employed in the prior art and was *not* the invention of Berliner. Complainants' contention to the contrary is error.

(*b*). *Berliner's early domestic and foreign patents.*

Berliner's work consists of *three stages*, each of

which is represented by domestic and foreign patents obtained or applied for, respectively, in 1887, 1888 and 1889-1892.

First Stage: In 1887 Berliner invented, and applied for patents upon, the *copying in solid resisting material*, preferably by the *photo-engraving* process, of Scott's phonautographic record traced in non-resisting material, in connection with unimportant *modifications* of the previously well known sound recording and sound reproducing machines. For this invention Berliner obtained British Patent No. 15,232, of November 8, 1887 (T., p. 516); French patent No. 186,827, of November 8, 1887 (T., p. 123); and German patent No. 45,048, of November 8, 1887 (T., p. 132). The drawings of these three foreign patents are identical and by stipulation (T., p. 540, fol. 1620) only the drawings of the British patent are reproduced. The French patent is a literal translation of the British patent (T., p. 81, fol. 242). The German patent describes the same invention with slightly different phraseology.

The three foreign patents each describe an original and a second or improved form of the invention; hence, in the United States Berliner obtained two patents for this invention and improvement thereon, No. 372,786, of November 8, 1887 (T., p. 416), the seven figures of which are identical with Figs. 1-7 of the three foreign patents, and No. 564,586, of July 28, 1896, applied for November 7, 1887 (T., p. 463), of which Figs. 1-9 are identical with Figs. 8-16 of the three foreign patents. Figs. 10 and 11 of the United States patent No. 564,586 are not shown in the foreign patents. Fig. 11 is unimportant, but Fig. 10 is the basis of

complainants' contention that claims 5 and 35 of the patent in suit were not anticipated and were valid. As hereinafter shown under Point Eight (*infra*, p. 164), if complainant's contention is correct, the patent in suit expired with the expiration of the three prior foreign patents, since the three foreign patents describe and claim the invention, if any, shown in said Fig. 10, which Berliner said was a mere modification of Fig. 1 not departing from the main features thereof (T., p. 469, line 90).

Second Stage: In 1888 Berliner invented, and applied for patents upon, an improved process, *the etching process*, for copying in solid resisting material Scott's phonautographic record of lateral undulations and uniform depth traced in non-resisting material. For this invention he obtained British patent No. 7204 of May 15, 1888 (T., p. 528); French patent No. 190,602, of May 15, 1888 (T., p. 124), which is a literal translation of the British patent (T., p. 81, fol. 242); German patent No. 47,099, of May 16, 1888 (T., p. 145), which was a patent of addition to German patent No. 45,048 of the first stage; and U. S. Patent No. 382,790, of May 15, 1888 (T., p. 434).

Third Stage: From 1889-1892 Berliner invented, and applied for patents upon, an improvement in the construction of the *recorder* and *reproducer* of the machines employed by him for recording and reproducing sound, together with an unimportant modification of his etching process of 1888 for recording sound. For this invention he obtained German patent No. 53,622 of November 20, 1889 (T., p. 150), which was a second patent of addition to German patent No. 45,048 of the first stage; French patent No. 207,090 of July

19, 1890 (T., p. 126); and the U. S. patent here in suit No. 534,543 of February 19, 1895 (T., p. 452). As hereinafter shown under Points Six and Seven (*infra*, pp. 114, 152), the patent in suit expired with said prior German and French patents.

(*c*.) *The relation of claims* 5 *and* 35 *of the patent in suit to Berliner's earlier work.*

The patent in suit, including claims 5 and 35 thereof, describes and claims only improvements upon what was described and claimed in Berliner's prior domestic and foreign patents. The sequence of Berliner's work, consisting of improvements upon the prior art and of modifications of such improvements, appears clearly from Berliner's three, successive German patents, of which No. 45,048 of November 8, 1887 (T., p. 132) was the original patent and of which No. 47,099 of May 16, 1888 (T., p. 145), and No. 53,622 of November 20, 1889 (T., p. 150) were first and second patents of addition thereto, being patents for inventions which were improvements upon the invention of the original patent. In accordance with the German patent law (T., p. 180, fol. 538) and the limitations appearing upon the face of the patents, the original patent and the two patents of addition expired together on November 7, 1902, fifteen years from the date of the original patent.

Berliner's original German patent No. 45,048 covers the original or basic form and the second or improved form of his invention and corresponds to his original British patent No. 15,232 of November 8, 1887 (T., p. 516) and to his original French patent No. 186,827 of November 8, 1887 (T., p. 123), each of which covers the original or basic

form and the second and improved form of his invention. In the United States the original or basic form of the invention was described and claimed in patent No. 372,786 of November 8, 1887 (T., p. 416), and the second or improved form of the invention was described and claimed in patent No. 564,586, granted July 28, 1896, upon an application filed November 7, 1887 (T., p. 463).

The original or basic form of Berliner's invention is accurately and briefly described in claim 1 of U. S. patent No. 372,786 of November 8, 1887, as follows (T., p. 419):

> "1. The method or process of recording and reproducing spoken words and other sounds, which consists in first drawing an undulatory line of even depth in a traveling layer of *non-resisting* material by and in accordance with sound-vibrations, then producing the record thus obtained in *solid resisting* material, and *finally imparting vibrations to a sonorous body, by and in accordance with the resisting record*, substantially as described."

In the basic form of his invention Berliner employed lampblack as the non-resisting material in which to record sound vibrations (T., p. 418, line 44), forming a recording surface mounted upon a cylinder or drum (T., p. 419, line 54), but stated that he did not confine himself to the use of lampblack or to a recording surface mounted upon a drum (T., p. 419, lines 54-66). In the second and improved form of his invention Berliner employed a new recording medium consisting of a layer of semi-fluid ink or paint (T., p. 466, lines 77-97) and a flat, instead of a cylindrical, surface upon which to mount the non-resisting recording medium (T., p. 466, lines 40-61). In the second, as well as in the original, form of his invention, Ber-

liner copied in solid resisting material, preferably by the photo-engraving process, now discarded, the sound record traced in non-resisting material, but in the original form of his invention the copied record was shown as a cylinder, while in the second and improved form the copied record was a disc.

For the reproduction of sound from the record copied in solid resisting material, Berliner employed sound-reproducing machines of the prior art, adapted in one case to reproduce sound from a cylindrical, and in the other from a disc, record (T., p. 526, Figs. 1 and 8; p. 465, Fig. 10). As above explained (*supra*, pp. 22-23), in the sound-reproducing machines employed by Berliner, the reproducing stylus was guided or fed and vibrated by the record-groove, either with or without the aid of a feed-screw, in precisely the manner disclosed in the prior art. *In the reproduction of sound from a sound record Berliner employed no new principle whatever, the differences between sound reproducing machines employed by Berliner and those of the prior art consisting of modifications of details of construction, as hereinafter pointed out* (*infra*, pp. 167-170).

The improvement made by Berliner in 1888 upon his basic invention consisted of a new process, now discarded, for copying in solid resisting material the original record traced in non-resisting material. In this new process Berliner substituted a solution of wax for lampblack as the recording medium, moistened the wax film with alcohol, traced the record-groove through the wax film, thus exposing the plate of metal or glass carrying the film, and then, by the use of acid, *etched* the record-groove into the plate, whereupon duplicates of the etched record were made by Edison's electrotype process of

1878. For this improvement of 1888 Berliner obtained the British, French, German and United States patents of 1888 mentioned under the second stage of his work (*supra*, pp. 21, 25). Claims 3 and 5 of the United States patent No. 382,790 (T., p. 436), the claims of which are identical with those of the British and French patents, briefly summarize the principal features of the improvement of 1888 and are as follows;—

> "3. The method or process of producing a record of sound-waves in solid resisting material for reproduction of the recorded sounds, which consists in depositing upon the surface of such material a *film of wax* from a solution of the same in benzine, then making a phonautographic record upon and through the wax film, and then exposing the record to the action of a suitable *etching* agent, substantially as described.
>
> "5. The method or process of preparing solid surfaces for the reception of a phonautographic record, which consists in depositing upon said surfaces a film of wax and then *moistening the wax film with alcohol*, substantially as described."

The relation existing between the inventions of his early patents and the improvements thereon described and claimed in the patent in suit No. 534,543 of February 19, 1895, applied for March 30, 1892, for features of improvement in the "gramophone" (T., p. 452) was stated by Berliner at the outset of the patent in suit as follows (T., p. 456, lines 8-16);—

> "My invention has reference to *improvements* in the *method* of and *apparatus* for *recording* and *reproducing* sounds, the *improvements being more particularly directed to the*

> construction of that kind of sound *recording* and *reproducing* apparatus which I have called gramophone, and for which letters-patent of the United States No. 382,790, dated May 15, 1888, have been granted to me."

Thus we see that the invention of the patent in suit was an improvement upon the gramophone of patent No. 382,790 of May 15, 1888, and that, according to Berliner's statement above quoted from the patent in suit, *the improvement was made subsequent to May 15, 1888.*

In patent No. 382,790 of May 15, 1888 (T., p. 434, lines 8-20) and in patent No. 564,586 of July 28, 1896, applied for November 7, 1887 (T., p. 466, lines 8-39), Berliner states that the inventions thereof are improvements upon that described in his patent for the original and basic form of his invention, No. 372,786 of November 8, 1887 (T., p. 416).

When, therefore, Berliner filed his application for the patent in suit, No. 534,543, on March 30, 1892, he had already secured No. 372,786 on November 8, 1887, and No. 382,790 on May 15, 1888, and had, more than four years previously, and on November 7, 1887, filed his application for No. 564,586, although the patent upon the application of November 7, 1887, did not issue until July 28, 1896. He had also secured, for *Suess'* improvements upon his gramophone, Letters-Patent of the United States, No. 427,279, issued May 6, 1890, on an application filed August 6, 1889 (T., p. 446), and Letters-Patent of Canada, No. 41901, issued February 11, 1893, on an application filed May 5, 1891 (T., pp. 155-175), which Letters-Patent of Canada for Suess' improvements Judge Townsend found (T., p. 324, fol. 971), "*discloses and broadly*

claims the invention covered by the claims here in suit."

The application for the patent in suit, therefore, was filed several years later, at least four years later, than the application for any one of the other three Berliner patents above mentioned and considerably later than the application for either of the two Suess-Berliner patents mentioned. We should expect to find in the patent in suit, therefore, a statement that the invention of this patent consists in *improvements upon* the gramophone of the earlier patents; and such is the statement which Berliner makes in the first words describing the invention of the patent in suit, for at page 456, lines 17-36, he says;—

> "*One feature* of my invention has reference to *improvements* in the *method of recording sound* by tracing upon a fatty film deposited upon a metallic surface, undulatory lines, corresponding to sound waves, and then etching such lines in the metal base, or, as it is now commonly called, the record tablet; while the *other features* of my invention have reference to the *construction of the details of both the recorder and the reproducer of the gramophone.* Each of these *features of improvement* are designed to overcome certain difficulties, and to avoid certain imperfections *heretofore met with in the operation of the gramophone.* These difficulties and imperfections, and the manner in which they are avoided, will be particularly pointed out in the following detailed description with reference to the accompanying drawing, in which—"

In the specification Berliner first describes his improved *recording machine as a whole* (p. 456, line 31, to p. 458, line 2.) This improved recording machine is illustrated in figures 1 and 2. The

construction of the apparatus for the convenient *application of alcohol*, more alcohol than was used according to prior patent No. 382,790, during the process of recording, is the main feature here described of the improvement. Next Berliner describes the recording diaphragm and stylus or *recorder* (p. 458, line 3 to line 109). The recorder is illustrated in figures 4 and 5 of the drawings and is shown in figures 1 and 2 as part of the recording machine. Next Berliner describes the *mouth-piece* shown in figure 8 (p. 458, lines 110-126). Next Berliner describes the use of the recording machine for the recording of sound with the aid of *alcohol spread continuously*, instead of once as in prior patent No. 382,790, upon the surface of the record tablet (p. 458, line 127, to p. 459, line 94). This operation is illustrated in Figure 1. Next Berliner describes the *reproducing apparatus as a whole* (p. 459, line 95, to p. 460, line 33). It will be noticed that although Berliner states that "*My* improved gramophone recorder is shown as a whole in figs. 1 and 2" (p. 456, line 51), he does not state that the reproducing apparatus as a whole is his invention; but his language is, "*The* reproducing apparatus as a whole is represented in Fig. 3," (p. 459, line 95). As will hereafter be shown (*infra*, pp. 105-110), the reproducing apparatus as a whole and the main features of the reproducing apparatus were, *according to Berliner's own statements*, the invention of Werner Suess. Suess, however, was anticipated by Edison and Bell & Tainter (*infra*, pp. 65, 80). Next Berliner describes the reproducing diaphragm and stylus or *reproducer* (p. 460, lines 34-102). The reproducer is illustrated in figs. 6 and 7, is shown as *part of the Suess reproducing apparatus illustrated as a whole*

in fig. 3, and embodies the true essence of the improvements claimed in claims, 5 and 35, in suit.

Next come the *claims of the patent*, thirty-five in number. Claims 1-4 cover the continuous use of alcohol in the process of recording. Claim 5, in suit, covers Edison's prior *method* of reproducing sound, consisting in "*vibrating*" and "*propelling*" a stylus "*along*" a record, by and in accordance with the record. Claims 6-16 cover the improved *recording* diaphragm and stylus or *recorder*. Claims 17-22 cover a new form of the horizontal rotary table, shown in the earlier application for patent No. 564,586 and in the prior foreign patents of 1887. Claim 23 covers the *mouth-piece* shown in fig. 8. Claims 24-34, except claim 31, which is for the *recording* stylus, are for the improved *reproducing* diaphragm and stylus or *reproducer*, claim 25 covering also the improved *recording* diaphragm and stylus. Claim 35, in suit, covers *something not stated*, IN Edison's prior reproducing apparatus, consisting of a *travelling* tablet having a sound record formed thereon and a reproducing stylus, shaped for engagement with the record as in claim 32 and *free to be vibrated and propelled* by the record.

Such then are the description and claims of the patent in suit covering *as one feature*, the improvement in the *method of recording* and covering, *as the other features*, the construction of the *recorder* and the *reproducer* of the gramophone, and constituting *improvements* upon the method of, and apparatus for, recording and reproducing sound set forth in the *basic patent* No. 372,786, and in the other earlier patents above mentioned.

A comparison of Figs. 1 and 2, which show Berliner's improved recording apparatus as a whole,

with Figs. 4 and 5, which show the improvements in the recorder, makes it clear that the improvements in the *recorder* are incorporated in the improved recording apparatus as a whole and form a *substantive* part thereof. So a comparison of Fig. 3, which shows the Edison-Suess reproducing apparatus as a whole, not claimed by Berliner to be his invention, with Figs. 6 and 7, which show the improvements in the reproducer, makes it clear that the improvements in the *reproducer* are incorporated in the reproducing apparatus as a whole and form a *substantive* part thereof, and are, indeed, the *essence* of the improvements in the reproducing apparatus for which, together with the improvements in the recorder, Berliner applied for the patent in suit. *As hereinafter shown* (*infra*, p. 96) *the reproducing apparatus shown as a whole in Fig. 3 and its method of operation were unquestionably the invention of Werner Suess, and Berliner so stated, when as Suess' assignee he applied for and obtained Canadian patent therefor No. 41,901, issued Feb. 11, 1893, applied for May 5, 1891* (T., pp. 155-175). Judge Townsend, moreover, so found, for he states in his opinion that the Suess-Berliner Canadian patent "*discloses and broadly claims the invention covered by the claims here in suit*" (T., p. 324, fol. 971). Suess, however, was, as above stated, anticipated by Edison and Bell & Tainter (*infra*, pp. 65, 80).

From the foregoing analysis and consideration of the patent in suit, it appears, without question, that the *improvements* described and claimed relate, *first*, to the recording of sound, and, second, to the reproducing of sound. It is impossible seriously to contend that the essence of the improve-

ments consists rather in the *reproduction* of sound than in the *recording* of sound.

In the passage above quoted from the patent in suit (*supra*, p. 31), Berliner specifically stated the important features of the invention described and claimed in the patent. *One feature* he said has reference to improvements in the *method of recording sound*, while *the other features* have reference to the construction of both the *recorder* and the *reproducer* of the gramophone. These features of improvement were designed, he said, to overcome certain difficulties and to avoid certain imperfections theretofore met with in the operation of the gramophone. This was the patentee's express declaration of the features of the improvement contained in the patent. He did not claim that Suess' sound-reproducing *machine* illustrated in Fig. 3 was his invention, nor did he state that such machine or the mode of operation thereof was a feature or the principal feature of the invention described in the patent. As stated by the Circuit Court of Appeals for the Second Circuit, in *Matheson* v. *Campbell*, 78 Fed. 910, 917;—

> "It must be *sound law*, as it is reasonable *common sense* to hold that the *tests of prime importance* in a suit for infringement are those which the *patent itself* prescribes. The inventor certainly may be assumed to know what it is that he has invented. If any one is able to describe the product of his inventive skill, it is himself. He surely knows the ear-marks of the thing he seeks to patent. * * *"

In the face of this express and positive declaration of the patentee as to what are the *features* of his invention, the Courts below not only held

that the patent included other features not enumerated by Berliner, but *went even further and held that the features which Berliner did enumerate as the features of his invention are not the principal features of his invention but are mere minor details* (T., p. 318). In other words, the Courts below held that the patentee did not know what it was that he invented. In his lecture before the Franklin Institute (T., p. 266), Berliner said:

> "I will now describe the *most important* apparatus of the *gramophone*—the *recorder*."

Equally important with the *recorder* is, of course, the *reproducer*, which as Berliner stated in the Franklin Institute lecture, "is constructed on precisely the same principles as the recorder" (T., p. 268). The *recorder* and the *reproducer* each consists of a diaphragm and stylus suitably constructed and conected. *The patent in suit is the first patent, except the prior foreign patents for the same invention, in which Berliner describes and claims his recorder and reproducer whereby the stylus is permitted to be vibrated laterally instead of vertically.*

> *(d). The expression "principal invention" was used by this Court in Siemens' Adm'r v. Sellers, 123 U. S. 276, merely to designate one of two inventions, and not as a ground of decision. The Courts below erred in refusing to follow the principle of the decision in that case and erred in holding that, because, contrary to Berliner's express statements, they regarded one feature as more important than other features of the invention, the patent in suit has a plurality of terms.*

The expression "principal invention" was used by this Court to denote an invention upon which a subsequent invention constituting an improvement had been made. This was in the case of *Siemens' Adv'r* v. *Sellers*, 123 U. S. 276, where it was held that a United States *patent* was limited as to its *term* by a prior English patent because both patents claimed "*an*" invention, which in that case happened to be the original invention upon which improvements, constituting a separate invention, had subsequently been made and claimed in the United States patent. *The expression "principal invention" was used in antithesis to an invention consisting of claimed and patentable "improvements" upon that invention, which also necessarily consisted of patentable "improvements," merely to refer to and to point out* AN *invention which was found in both the United States patent and in the prior English patent;* but the relative importance of the original invention and of the invention consisting of improvements upon it was not considered or stated by this Court and in no sense entered into the decision of the case, for this Court expressly said, that a patent "*cannot be construed as running partly from one date and partly from another. This would be productive of endless confusion.*" In other words this Court squarely held that if a United States patent, expires as to one or more of its claims for *an invention*, previously patented in a foreign country, for which it was granted, it must expire as to all of its claims, no matter what other invention they may cover. A United States patent, therefore, must have a *single* term, which cannot, where the United States patent is "granted for *an invention*" (Rev. St. §4887) previously patented in a foreign

country, exceed the *shortest term* of the terms of the prior foreign patents. But the Courts below in the suit at bar, refusing to follow the decision of this Court to the effect that a patent "cannot be construed as running partly from one date and partly from another" have held that although the patent in suit has expired as to many or most of its thirty-five claims, it, nevertheless, survives as to the two claims, 5 and 35, in suit. *For the first time in the history of the patent law of this country it has been held, contrary to the clear provision of §4887 of the Revised Statutes and to the decision of this Court in Siemens' Adm'r v. Sellers, supra, that a patent can be construed as having a plurality of terms and as running partly to one date and partly to another and that the endless confusion necessarily resulting therefrom is, in effect, a matter of no consequence.* As will hereinafter be more fully shown (*infra*, pp. 127-135), the Courts below erred in so holding. At the present time it is intended merely to point out that, under §4887 of the Revised Statutes, the relative importance of the subject matter of various claims of a patent is not controlling; and that it cannot reasonably be held or said of the claims of the patent in suit either that the claims which cover the reproduction of sound are more important than those which cover the recording of sound, or that among the several claims covering the reproduction of sound any tenable ground exists for holding that the two claims in suit, 5 and 35, are more important than the others, which cover *principal* and *essential* features of improvement of the patent according to the express statement of the patentee. *They are all claims for improvements,*

stand in the same category, and are subject to the same rule of law, as to expiration under the Statute.

The Revised Statutes (§4887) provides;—

> "But every *patent* granted for *an* invention which has been previously patented in a foreign country *shall be so limited* as to expire at the same time with the foreign patent, or, if there be *more than one*, at the same time with the one having the *shortest term*."

This provision fixes the *term* of the home *patent*, which *term* shall expire with the expiration of the term of the prior foreign patent, *provided that the invention previously patented in a foreign country is an invention also covered by the home patent.*

The Courts below, by their decision, have involved the patent law in the "*endless confusion*" which this Court said would be the result of holding that a patent could have a *plurality of terms.* It is respectfully submitted that if the courts are to weigh the relative importance of the different claims of a patent and are to differentiate the various claims of a patent by holding that some of the claims are for features that are basic in their nature and that others are for features that are not basic in their nature, and are to hold, by judicial construction and *not upon any provision of the statute*, that, by reason of such subtle distinction, §4887 of the statute does not apply where the *invention* previously patented in a foreign country and claimed in the home patent is, *in its opinion*, not basic, and does apply where such invention is, *in its opinion*, basic, the condition of uncertainty and confusion resulting therefrom would be intolerable. And how, and by what rule, it may be asked, is the court to determine which claims are

for features that are basic and which claims are for features that are not basic? Is each patent to be a law unto itself? Is the court to read into the statute conditions and provisions not contained in the statute? Is the question of expiration, under the statute, and the application of the statute to be left to judicial discretion and discrimination? The mandate of the statute is clear and unambiguous. It leaves no room for confusion and uncertainty. Under it, where an *invention* previously patented in a foreign country is patented in this country, the home "*patent*," and, therefore, *all* the claims thereof, must be so limited as to expire with the expiration of the foreign patent, or if there be more than one prior foreign patent, with the expiration of the one having the *shortest* term. The only question open to the court for determination, under the statute, is whether *the invention previously patented in the foreign country* is an invention covered by the claims of the home patent. If so, the statute *applies*, and it is immaterial whether or not the home patent covers some *other* invention because, *if it is subject to that statute or law at all*, it must, under the well settled law and the clear mandate of the statute, expire with the foreign patent (see discussion and authorities cited, *infra*, pp. 135-145, under Point Six). Upon the expiration of the patent, all its claims expire, since, as this court said, a patent cannot be construed as running partly to one date and partly to another, for this would be productive of endless confusion. In other words, *a patent cannot expire in parcels, it cannot have a plurality of terms.*

Whether two patents are granted for the same invention is a question of law to be determined by the court from a comparison of the patents. The question of infringement is also one of law.

These propositions are well settled (*Miller* v. *Eagle Mfg. Co.*, 151 U. S., 186, 196; *Heald* v. *Rice*, 104 U. S., 737, 749; *Singer Co.* v. *Cramer*, 192 U. S., 265, 275; *Thomson-Houston Co.* v. *Western Co.*, 158 Fed. 813, 816; *Western Electric Co.* v. *Robertson*, 142 Fed. 471, 478).

The questions presented are, therefore, *pure questions of law*, arising upon the face of the patents and other printed publications contained in the record. They were so considered and decided by the Courts below. Although defendant's witnesses have dealt fully with the subject matter of the patents and publications referred to (T., pp. 76-123; pp. 191-197; pp. 230-242; pp. 283-313), the subject matter of the patents and publications is so clear, that reference to the testimony of the witnesses would, in most cases, be superfluous.

The specifications and drawings of the prior German and French patents relied upon are properly proved, together with certificates of the Patent Offices and the laws of Germany and France.

Rule 13 of this Court reads as follows:—

> "In all cases of equity or admiralty jurisdiction, heard in this court, no objection shall hereafter be allowed to be taken to the admissibility of any deposition, deed, grant, or other exhibit found in the record as evidence, unless objection was taken thereto in the court below and entered of record; but the same shall

otherwise be deemed to have been admitted by consent."

The evidence was closed at the time of the argument in the Circuit Court. No objection was made by either party to the evidence introduced by the other party, and no objection was entered of record. In the Circuit Court of Appeals, however, complainants' counsel, realizing the effect of the prior German and French patents, raised the technical and invalid objection that the *deeds* of grant had not been offered in evidence. If the objection had been made in the Circuit Court before the close of the evidence and entered of record or inserted in the decree, the objection would not be valid.

It is well known that the German Patent Office will not grant a copy of the patent deed, and such it is believed is the practice of the French Patent Office, since a copy of the patent deed in the suits at bar was requested but could not be obtained. In Canada, it was requested and obtained (T., p. 155). However, the copies of the German and French patents are certified by the Patent Offices of Germany and France. The grant of the patents, the duration of the patents, the subject matter of the patents all appear. Judge Severens dealt summarily with such objections in *Western Elec. Co. v. Citizens' Tel. Co.*, 106 Fed. 215. Reference to the cases on appeal in *Siemen's v. Sellers*, 123 U. S., 276, and *Commercial Mfg. Co. v. Fairbank Co.*, 135 U. S., 176, and to all the reported cases shows that the certification of the foreign patent office of the description, claims and drawings of a foreign patent is sufficient, and clearly it is sufficient when accompanied by the certified preliminary statements here in evidence. Furthermore, the question is conclusively settled by the following clear

provision of §893 of the Revised Statutes, which reads as follows;—

> "Copies of the *specifications* and *drawings* of foreign letters patent certified as provided in the preceding section, shall be *prima facie evidence* of the fact of the *granting* of such *letters patent*, and of the *date* and *contents* thereof."

Under this section no copy of the patent deed, which, as is well known, cannot be obtained from many foreign countries, is necessary. In *Pohl* v. *Anchor Brewing Co.*, 134 U. S., 381, 383, this Court held that from the face of the specification the duration and date of a prior foreign patent could be obtained; so did the examiner of patents in *ex parte Trotter* 32 O. G., 1603. As appears from § 893 of the Revised Statutes above quoted, and from § 1015 of Robinson on Patents, certified copies of the specifications and drawings of foreign letters-patent, certified by the head of the foreign patent office, are *prima facie* evidence of the fact of the granting of such letters-patent, and of the date and contents thereof, and are admissible in evidence. In *Rosseau* v. *Brown*, cited by complainant's counsel in the Circuit Court of Appeals, the question was, what was the date of *application* of the foreign patent? The court did not hold that under § 893, above quoted, certified copies of the specifications and drawings of a foreign patent were not evidence of the *granting* of the letters-patent and of the *date* and *contents* thereof, but held only, that the French patent deed had not been exhibited in evidence and that even if it had been in evidence it would have had no effect, since, in the interference in question, the contesting party was entitled to priority.

In addition to the certified copies of the German,

French and Canadian patents offered in evidence, the material parts of the Patent Acts of France, Germany, Canada and Great Britain (T., pp. 176-190), in force at the times the aforesaid patents were applied for and granted, were proved in evidence without objection (T., p. 81, fols. 243-244).

Clearly, under Rev. St. § 893 above quoted, the duly certified copies of the specifications and drawings of the foreign letters-patent are *prima facie* evidence of the granting thereof and of the dates and contents thereof In addition, the laws of the foreign countries are in evidence, proved without objection. If complainants had any valid objection to make, such objection should have been made in the Circuit Court, whereupon the objection, if valid, could have been met by defendant.

It would seem, although the point has never been directly passed upon, that the courts should take judicial notice of the Patent Acts of foreign countries

Judge Severens said in *Western Electric Co.* v. *Citizen's Tel. Co.*, 106 Fed. 215, that the court ought to take judicial notice of such facts as the laws of foreign countries relating to patents as being within the range of information conveyed by encyclopedias and other repositories of facts of general interest. In *Pohl v. Anchor Brewing Co.*, *supra*, and many other cases which might be cited *Carpmael's Patent Laws of the World* was used as the source of information for the patent laws of France and Germany.

That the courts of the United States will take judicial notice of an act of Canada where the act has the notoriety sufficient for such purpose was decided by this court in *The New York*, 175 U. S., 187, 195-197, where it was held that an act of Can-

ada regulating the navigation of Canadian waters was an act of such general application and notoriety as to warrant the courts of the United States to take judicial notice of it. Since § 4887 of the Revised Statutes limits the term of the home patent by the legal term of a foreign patent, and since the patent laws of foreign countries are set forth in encyclopedias and other repositories of general information, as stated by Judge Severens, no distinction can exist between the patents laws and the navigation laws of foreign countries by reason of which the courts of this country should take judicial notice of the navigation laws and should not take judicial notice of the patent laws of foreign countries. As stated by this court in the case cited, following an opinion of Chief Justice Marshall in an early case, the courts of this country can take *judicial notice of the public laws of a foreign nation on a subject of common concern to all nations and the negative of this proposition, said the great Chief Justice, has not been maintained in any of the authorities adduced.* The principle cannot be confined to admiralty cases.

POINT ONE.

Claims 5 and 35 of the patent in suit are void because they are claims for the functions of a machine.

(*Assignment of errors 30 and 31, supra, p. 12*).

Claims 5 and 35 of the patent in suit read as follows:

> "5. The *method* of reproducing sounds from a record of the same which consists in *vibrating* a *stylus* and *propelling* the same *along* the

record *by* and in accordance with the said *record*, substantially as described.

"35. In a sound reproducing apparatus consisting of a *traveling tablet* having a sound record formed thereon and *a reproducing stylus* shaped for engagement with said record and *free to be vibrated and propelled* by the same, substantially as described."

In the contempt proceedings in this suit, to review which this court granted its additional writ of *certiorari* (case No. 81, October Term, 1908), Judge Wallace, at the opening of his dissenting opinion in the Circuit Court of Appeals, said (154 Fed. 61);—

"In considering the question of infringement, claim 5 may be laid out of view, as it covers merely *the function of the machine or combination of claim 35*. It is more than doubtful whether the claim is not void upon its face, but assuming it to be valid, as must be done for present purposes, it is not infringed except by using the combination or machine of claim 35."

In the reproduction of sound from a record of the same, according to claim 5, *a traveling tablet* having a sound record formed thereon and *a reproducing stylus* shaped for engagement with said record and in engagement therewith and free to be vibrated and propelled by the record are necessary, including the mechanism necessary to make the record-tablet travel and to mount the stylus. In other words, all the elements of the sound reproducing apparatus or machine described in claim 35 are necessary for carrying out the method of claim 5. On the other hand, the method of claim 5 can be carried out *only* through the employment of all

the elements constituting, in combination, the sound reproducing apparatus described in claim 35. Whether the stylus is mounted on Edison's or Suess' pivoted, swinging arm, as in Fig. 3 of the patent in suit, or is held by the hand of the operator is immaterial, because in either case all the elements mentioned of the *sound reproducing machine* are necessary, are the same and are present. The pivoting of the stylus by a human arm instead of by an arm of wood does not justify complainants' contention that claim 5 is not a claim for a function. Planing a board, holding the plane in the hand, is a mechanical process and not patentable, because the so-called "process" is nothing but the function of a machine (*Westinghouse v. Boyden Co., infra*, pp. 56-57). Clearly claim 5 is, as Judge Wallace said, merely a claim for the function of the machine or combination mentioned in claim 35. Claim 5 is, therefore, invalid.

The specification of the patent in suit describes one, and only one, way and means of practicing the method of claim 5. The specification says (T., p. 460, lines 19-33);—

> "It will now be understood, that when *a record tablet*, having a record of sound waves upon its surface, produced in accordance with my invention, is mounted upon the table 79, and when the point of *the stylus* is *adjusted in engagement* with the record groove, *and the wheel 80, is rotated, the rotating record groove* will *guide* the stylus across the face of the tablet, *and* will at the same time *vibrate* the stylus and diaphragm in accordance with the undulations of the record groove. The sound waves thus produced by the diaphragm will issue from the flaring opening of the trumpet, and the sounds will be heard by a listener in front of the trumpet, or in its vicinity."

The passage quoted describes the function of the machine or combination mentioned in claim 35. Unless the elements of the machine or combination mentioned in claim 35 are all employed precisely as set forth in the patent, the method of claim 5 cannot be practiced.

It is, of course, immaterial whether the reproducing stylus is "*free to be vibrated and propelled*," along the record, by and in accordance with the record, because its freedom for such purpose is due

(1) to its adjustment at the free end of a *movable or pivoted arm* as shown in Figs. 34 and 37 of prior British patent No. 1644 of 1878 to Edison (T., p. 486), which patent, as shown under Point Three (*infra*, p. 65), is a complete anticipation of claims 5 and 35 of the patent in suit; or

(2) is due to the employment of a universal joint obtained by the use of *a rubber tube* to which the reproducer carrying the stylus is affixed, as shown in Figs. 8 and 13 of prior U. S. patent No. 341,214 of May 4, 1886 to Bell & Tainter (T., p. 387), which patent, as shown under Point Four (*infra*, p. 80), is another complete anticipation of claims 5 and 35 of the patent in suit, and which rubber tube, supported by the Edison-Suess pivoted arm, was shown by Berliner in his lecture before the Franklin Institute of May 16, 1888, to embody the novel feature which complainant now contends is covered by claims 5 and 35 (T., p. 269, "Reproducing Apparatus, May, 1888"; p. 270, fol. 809; p. 232, Q 14); or

(3) is due to the employment of the discarded and impractical arrangement, consisting of *a truck* carrying the diaphragm and stylus and *provided*

with wheels rolling upon a horizontal rod, shown in Fig. 10 of U. S. patent No. 564,586 of July 28, 1896, applied for November 7, 1887, to Berliner (T., p. 465); or

(4) is due to the employment of a diaphragm and stylus mounted on the free end of *a pivoted, swinging arm* permitted to move in reproducing sound by a pin traveling in a guide-groove or by a feed-screw, so that the reproducing stylus is at all times free to be vibrated, guided and propelled along the record by and in accordance with the record, as shown in Figs. 1-15 of prior British patent to Edison, No. 1644 of 1878 (T., p. 484), or in Figs. 1 and 8 of Berliner's prior British patent No. 15,232 of 1887 (T., p. 526).

In all such cases the reproducing stylus is "*free to be vibrated and propelled*," by and in accordance with the record, and "*along*" the record, as stated in claims 5 and 35. The only limitation stated in claim 5 or in claim 35 is that the stylus shall, in the case of claim 5, be *vibrated and propelled* "*along the record*" by and in accordance with the record, or, in the case of claim 35, that the stylus shall be "*free to be vibrated and propelled*" along the record, by and in accordance with the record. The *means* by which the stylus is made "*free to be vibrated and propelled*" along the record, by and in accordance with the record, are not stated or referred to in either claim, but the *function* alone is claimed of an arrangement by which the stylus shall be "*free to be vibrated and propelled.*"

It should also be remarked that the record mentioned in claims 5 and 35 is not limited to a record having a *spiral* record-groove and the statement is that the stylus shall be propelled "*along*" the

record and not *across* the record. A record consisting of a straight groove upon a travelling tablet might, therefore, be employed. Such records were common (T., p. 473, line 53; p. 487, Figs. 56 and 57). There is, moreover, no limitation that the propelling of the stylus by the record shall occur in a machine not provided with suitable feed mechanism to keep the arm carrying the stylus properly adjusted so that the stylus shall at all times be free to perform its functions of following along the record and vibrating.

Claim 35 cannot be limited and held valid by construing the stylus "free to be vibrated and propelled" as meaning a stylus mounted upon a swinging arm, such as the swinging arm shown in Fig. 3 of the patent in suit (T., p. 454), because, as Berliner stated in his lecture before the Franklin Institute (T., p. 270, fol. 809) and in the Canadian patent which he obtained as the assignee of Suess (T., pp. 155-175), the swinging arm arrangement shown and described was broadly the invention of Suess. Judge Townsend found (T., p. 324) that the Canadian patent to Berliner for Suess' invention "discloses and *broadly claims* the invention covered by the claims here in suit," and "describes and claims the broad generic invention thereof" (T., p. 325). Moreover, such a limitation of claim 35 would invalidate it, not only because Berliner *shows no construction of his own invention* upon which the claim thus limited can be read, but because the *mounting* of a stylus as shown in Fig. 3 of the patent in suit, so that it shall be "free to be vibrated and propelled" along the record, by and in accordance with the record, was anticipated not only by Suess, but also by Edison, as shown especially in Figs. 34 and 37 of British patent No. 1644 of 1878

(T., p. 486; discussed under Point Three), and by Bell & Tainter, as shown by Figs. 8 and 13 of U. S. patent No. 341,214 of May 4, 1886 (T., p. 387; discussed under Point Four), and by the swinging arms of the prior art, which were kept in position by the aid of a feed-screw or guide-pin moving in a spiral groove, as shown by Figs. 1-15 of British patent No. 1644 of 1878 to Edison (T., p. 484; discussed under Point Three), so that the stylus was at all times free to be vibrated and propelled along the record, by and in accordance with the record.

This whole matter is summed up in claim 1 of British patent No. 1644 of 1878 to Edison, which reads as follows (T., p. 482);—

> "First. The combination with the diaphragm and point of a flat receiving surface and *means* for *revolving* the receiving surface, and *causing the point to follow a volute or spiral line*, substantially as represented in Figs. 1, 2, 6, 7, 8, 9, 10, and 34."

The expression "means for * * * causing the point to follow a volute or spiral line" employed by Edison in the above quoted claim, has the same significance, when applied to Edison's sound-reproducing apparatus, as Berliner's expression "a stylus * * * free to be propelled" by the record.

By reference in said claim 1 to Figs. 1 and 2, Edison showed that the point or stylus was, in *reproducing* sound, forced to follow the spiral line of the record solely by the pressure exerted upon the stylus by the walls of the record-groove, and that the point moving in the central spiral groove 3, necessary in recording, might be retained in reproducing, since its movement would *permit* the stylus to be freely vibrated and propelled by the

record-groove, but would not *cause* the same. *Only the record can vibrate the reproducing stylus and the force that vibrates it alone propels it.* By reference in said claim 1 to Figs. 6, 7, 8, 9 and 10, Edison showed that feed mechanism, used in recording, might also be retained in reproducing for the same reason.

By reference in said claim 1 to Fig. 34, Edison showed that the feed mechanism, as well as the central spiral groove 3 of Fig. 2, necessary in recording a spiral groove, might be dispensed with altogether in the reproduction of sound, and that the walls of the record-groove would, by themselves, cause the stylus to be fed across the face of the record as it vibrated and traveled along the spiral record-groove of the rotating tablet. A description of Fig. 34 (discussed under Point Three) is to be found at page 479, lines 48-53.

In Fig. 37 Edison also disclosed a stylus free to be vibrated and propelled by the record-groove without the presence of feed mechanism and solely by reason of the pressure exerted upon the stylus by the walls of the traveling record-groove. A description of Fig. 37 (discussed under Point Three) is to be found at page 480, lines 11-14, from which it appears that the stylus is carried "upon a *pivoted arm* so that it may *swing across* or at right angles to the line of movement of the indented material or phonogram." The line of indentation might be lengthwise of the traveling belt or across the same in the arc of a circle. In other words, the record-groove might be a continuous circle upon the belt or a volute or spiral line upon the belt, as upon a cylinder, and, in case the record-groove consisted of a spiral line, the stylus carried by the pivoted arm would be vibrated and

propelled across the belt, at right angles to the line of movement of the traveling record-groove, the pressure exerted by the walls of the record-groove upon the point of the stylus causing the pivoted arm to swing.

Thus Edison distinctly pointed out and claimed, as *equivalents*, the causing of the stylus to follow the record-groove, either by propelling the stylus across the face of the record by the walls of the record-groove *alone, as in Figs. 34 and 37*, or by similarly propelling a stylus mounted on the free end of a pivoted, swinging arm, permitted to swing by a guide-groove or a feed-screw, as in Figs. 1-10, for example.

As shown, in considering the relation of Berliner's work to the prior art (*supra*, pp. 17-19), Edison, in his British patent No. 1644 of 1878, as well as in his U. S. patent No. 200,521, of February 19, 1878, disclosed the *zigzag* record, that is, a record of lateral undulations and even depth, similar to Scott's phonautographic record of 1857. Neither claim 5 nor claim 35 sets forth any limitation restricting the claim to a record of even depth (*Cincinnati Co. v. American Co.*, 143 Fed. 322, 325). Judge Hazel in the prior suit, referring to claims 5 and 35, said (140 Fed. 864):—

> "The broad claims in suit in my judgment cannot be restricted to a record of even depth."

As shown by the evidence, the mode of operation is precisely the same whether the record employed is of even or of uneven depth (T., p. 294). This was decided years ago by the courts in the litigation over the prior Bell & Tainter patent No. 341,214 (*infra*, pp. 92-96; and 74 Fed. 789 and 87 Fed.

873, 878). The equivalency of the two types of records in this respect also appears in Edison's British patent No. 1644 of 1878 (*supra*, pp. 17-19).

Clearly an attempt is made in claim 35 of the patent in suit to claim a function and not means for accomplishing the function. Moreover, *the function claimed is the only thing upon which any pretense of novelty can rest.* Sound reproducing apparatus was old. A traveling tablet having a sound record formed thereon was old. A reproducing stylus shaped for engagement with said record was old. A stylus free to be vibrated was old, and although a stylus free to be propelled by a record-groove was old, as above shown, nevertheless, *upon this function as the sole pretense of novelty*, complainants argue that claim 35 broadly covers every sound reproducing apparatus in which the reproducing stylus is free to be propelled along the record, by the record. The claim is vicious, comes under the condemnation repeatedly made by this court of similar claims and is void.

Authorities showing that claims 5 and 35 of the patent in suit are void because they are claims for the function of a machine.

The decision of this Court in *Westinghouse* v. *Boyden Co.*, 170 U. S., 537, 554 (18 C. C. 70 Fed., 816, 829), is sufficient authority to show that claims 5 and 35 are invalid as being for the function of a machine. In that case it was held that if, in a claim for a combination of mechanical elements, *one* of the elements be properly interpreted as a function, the entire claim would be void, since it would be open to the objection, held in several cases to be fatal, that the mere function of a machine cannot be patented. Clearly claim 5 describes

nothing but the function of the machine illustrated in Fig. 3. Claim 35 includes as an element a stylus "*free to be propelled*" by the record. This function is clearly the function of the stylus shown in Fig. 3 of the patent in suit.

In *Westinghouse* v. *Boyden Co.*, 170 U. S., 537, this Court considered the following claim:

> "2. In a brake mechanism, the combination of a main air pipe, an auxiliary reservoir, a brake cylinder and a triple valve having a *piston* whose preliminary traverse admits air from the auxiliary reservoir to the brake-cylinder, *and which by a further traverse admits air directly from the main air pipe to the brake cylinder*, substantially as set forth."

The Circuit Court of Appeals (70 Fed., 816, 829) held this claim invalid, saying:

> "We think that when Claim 2 of 360070, in its language describing the action of that device, failed to describe the means by which the extreme traverse of the piston produced it, declaring merely that the piston by a further traverse admits air directly from the main air-pipe to the brake-cylinder, it was fatally defective, claiming only *a result, which is public property*, and not identifying the specific *means* (this own property) by which the result is achieved."

This Court, speaking of the same claim (170 U. S., 554) said:

> "The claim in question is, *to a certain extent*, for a function, viz., the admission of air directly from the train-pipe to the brake-cylinder, and is only limited to such function when performed by the further traverse of the piston of the triple valve. This *limitation*, however, does not vitiate the objection that the

means are not fully and specifically set forth for the performance of the function in question.

"The difficulty we have found with this claim is this: that if it be interpreted simply as a claim for the function of admitting air to the brake-cylinder directly from the train-pipe, it is open to the objection, held in several cases to be fatal, that the mere function of a machine cannot be patented."

(p. 568). "But after all, even if the patent for a machine be a *pioneer*, the alleged infringer must have done something more than reach the same result. He must have reached it by substantially the same or similar means, or the rule that the function of a machine cannot be patented is of no practical value. *To say that the patentee of a pioneer invention for a new mechanism is entitled to every mechanical device which produces the same result is to hold, in other language, that he is entitled to patent his function.*"

It is clear, therefore, that if, in a combination claim for a machine, *one element* of the combination claimed is a *function* of a part of the machine, the claim is invalid. The reason is that the function or effect of the machine is not patentable, and the insertion of a function as an element into a combination claim for a machine vitiates the *entire claim* and renders it invalid.

Perhaps the leading case upon the question of what is a patentable process is *Corning* v. *Burden*, 15 How., 252, in which, as stated by this Court in *Westinghouse* v. *Boyden Co.*, *supra*,

"Mr. Justice GRIER, delivering the opinion of the Court, drew the distinction between such processes as were the result or effect of 'chemical action, by the operation or applica-

tion of some element or power of nature, or of one substance to another,' and the mere result of the operation of a machine, with regard to which he says:

"'It is for the discovery or invention of some practicable method or means of producing a beneficial result or effect that a patent is granted, and *not for the result or effect itself.* It is when the term 'process' is used to represent the means or method of producing a result that it is patentable, and it will include all methods or means *which are not effected by mechanism or mechanical combination.*

"'But the term 'process' is often used in a more vague sense, in which it cannot be the subject of a patent. Thus we say that a board is undergoing the process of being planed, grain of being ground, iron of being hammered or rolled. Here the term is used subjectively or passively as applied to the material operated on and not to the method or mode of producing that operation, which is by mechanical means, or the use of a machine, as distinguished from a process.

"'In this use of the term it represents the function of a machine, or the *effect produced by it on the material subjected to the action of the machine.* But it is well settled that a man cannot have a patent for the function or abstract effect of a machine, but only for the machine which produces it.'"

In *Westinghouse* v. *Boyden Co.*, 170 U. S., 537, this Court also said:

"These cases assume, although they do not expressly decide, that a process, to be patentable, must involve a chemical or other similar elemental action, and it may be still regarded as an open question whether the patentability of processes extends beyond this class of inventions. *Where the process is simply the*

> *function or operative effect of a machine the above cases are conclusive against its patentability.*"

As pointed out in *Risdon Locomotive Works* v. *Medart*, 158 U. S., 68, 78, Mr. Justice GRIER, in *Corning* v. *Burden*, further said:

> "But where the result or effect is produced by a 'chemical action, by the operation or application of some element or power of nature, or of one substance to another,' such modes, methods or operations are called processes. *A new process is usually the result of discovery; a machine of invention.*"

In the *Telephone Cases*, 126 U. S., 1, 531, Mr. Chief Justice WAITE, in holding that "gradually changing the intensity of a continuous electric current so as to make it correspond exactly to the changes in the density of the air caused by the sound of the voice," for the purpose of transmitting vocal or other sounds, was a patentable process, also stated that a *process* was the result of *discovery*, and that a *machine* was the result of *invention*.

The elements or powers of nature, the inherent properties of substances and chemical action are things which exist independent of devices, machines and mechanisms invented by man. The cases hold that when some method is discovered for utilizing such elements or powers of nature, properties of substances or chemical action, such method is an art or process which is patentable. But methods or means which are effected by mechanism or mechanical combinations are not patentable as stated in *Corning* v. *Burden*, *supra*. *In Risdon Locomotive Works* v. *Medart*, *supra*, Mr. Justice BROWN, after reviewing the cases in which

certain processes had been held to be patentable, at page 77, said:

> "It will be observed that, in all these cases the process was either a chemical one, or consisted in the use of one of the agencies of nature for a practicable purpose.
>
> "*It is equally clear, however, that a valid patent cannot be obtained for a process which involves nothing more than the operation of a piece of mechanism or, in other words, for the function of a machine.*"

In the *Risdon* case a process consisting of several steps for the manufacture of pulleys was held to be mechanical and not patentable. In stating the reasons for the decision, Mr Justice BROWN, at page 71 (158 U. S.), said:

> "That certain processes of manufacture are patentable is as clear as that certain others are not, but nowhere is the distinction between them accurately defined. There is somewhat of the same obscurity in the line of demarcation as in that between mechanical skill and invention, or in that between a new article of manufacture, which is universally held to be patentable, and *the function of a machine which it is equally clear is not*. It may be said in general that processes of manufacture which involve chemical or other similar elemental action are patentable, though mechanism may be necessary in the application or carrying out of such process, *while those which consist solely in the operation of a machine are not*. Most processes which have been held to be patentable require the aid of mechanism in their practical application, but where such mechanism is *subsidiary* to the chemical action, the fact that the patentee may be entitled to a patent upon his mechanism does not impair his right to a patent for the process; since

> he would lose the benefit of his real discovery, which might be applied in a dozen different ways, if he were not entitled to such patent. *But, if the operation of his device be purely mechanical, no such considerations apply, since the function of the machine is entirely independent of any chemical or other similar action.*"

While it appears from the foregoing statement of this court "that processes of manufacture which involve chemical or other similar elemental action are patentable though mechanism may be necessary in the application or carrying out of such process," it also appears that it is *the process* which is patentable as a process and not the function of the mechanism which is subsidiary to the process. In other words, the operation of a piece of mechanism or the function and *result* of a machine is no part of a patentable process and is not patentable. If the process, and each step of the process, does not exist separate and apart from the function of a machine, though mechanism may be necessary to carry out the process, the process is not patentable (*Busch* v. *Jones*, 184 U. S., 598, 607; *Westinghouse* v *Boyden Co., supra; Steinmetz* v. *Allen*, 192 U. S., 543, 559, citing the *Telephone cases, supra*).

As pointed out in *Westinghouse* v. *Boyden Co., supra*, if the operation of a piece of mechanism or the function and *result* of a machine is made *one element* in a combination claim for a machine, such claim must be invalid because the operation and function or *result* of a machine or mechanism cannot be patented as part of a machine, and because a patentable process cannot be based in whole or in part upon the operation or function of a machine or mechanism. Mechanism subsidiary to the carrying out of a process may be patented as mech-

anism or as a machine, but the function or result of a machine cannot be patented as a process, or as part of a machine.

In *Hatch* v. *Moffitt*, 15 Fed., 252, the invention fell within the category of machines, and it was held, as stated in the head-note, that "a claim not only for the mechanism but also for the mode of operation generally, is void." This case was cited with approval by the Supreme Court in *Risdon Locomotive Works* v. *Medart*, *supra*. In *Stokes Co.* v. *Heller*, 96 Fed., 104, a similar claim for a process was held invalid. The court said:

> "The process is simply the mechanical operation of a combination of mechanical elements. There is no chemical or other similar elemental action involved in producing the desired result. This being true, we find that the operation as described is simply the function of the rasp-cutting machines, and as such is not the subject of a patent (*Risdon Locomotive Works* v. *Medart*, 158 U. S., 71, 84)."

In *Cleveland Co.* v. *Detroit Co.*, 131 Fed., 740, 742, the court said:

> "It has been held that there cannot be in the same patent a claim for a machine and a claim for the process of using that machine (*Gage* v. *Kellogg*, 23 Fed., 891, 894, and cases cited). This would make the fifth claim of doubtful validity. The process it describes is nothing more than a claim for the operative effect of a vapor burner. This is not patentable. (*Risdon Iron Works* vs. *Medart*, 158 U. S., 77, 79; *Westinghouse* vs. *Boyden Co.*, 170 U. S., 555, 557)."

The case of *Gage* vs. *Kellogg*, *supra*, was approved by the Supreme Court in *Risdon Locomotive Works* vs. *Medart*, 158 U. S., 68, 79.

In *Manhattan Co.* v. *Helios Co.*, 135 Fed., 785, Judge ARCHBALD held, as stated in head note 3, as follows:

> "The Baker patent, No. 684,165, for a method of regulating electric circuits, is void, as being merely for an operative theory, and one which, if sustained, would monopolize every means by which such theory may be utilized or applied."

In *Tyden* v. *Ohio Co.*, 152 Fed., 183 (C. C. A.), claim 1 of a patent for a pedestal extension table was held void because, among other elements mentioned, it claimed "means" for accomplishing a function without setting forth the means claimed. The Circuit Court of Appeals said (p. 185);—

> "It claims all means for locking and holding such pedestals, and is substantially a claim for a function. It cannot be upheld, and must be held void."

In *American Co.* v. *Steward*, 155 Fed., 731, 738, C. C. A., two process claims were held void as being claims for the function of the apparatus described. As in the patent here in suit, no means or way of practicing the process, except by the operation of the patented machine, was pointed out in the description of the patent.

In *American Co.* v. *Denning*, 160 Fed., 108, Judge REED collated some of the leading cases decided by this court upon the invalidity of patents claiming the function of a machine. At page 112 he quoted from the opinion of Mr. Justice GRIER in *Burr* v. *Duryee*, 1 Wall, 531, 570, as follows:

> "Because the law requires a patentee to explain the mode of operation of his peculiar machine, which distinguishes it from others, it does not authorize a patent for a 'mode of oper-

> ation' as exhibited in a machine. * * * The specification of this reissued patent, instead of describing, first, the machine and the several devices, which exhibit its peculiar mode of operation in order to produce the desired effect, and stating what the patentee claims as his peculiar invention, commences by describing 'a mode of operation' as the thing intended to be patented, and uses these words, 'The said mode of operation, * * * is embodied in the following description of the mode of application.' The claim is for the mode of operation, substantially as herein described. We have no leisure for a further development of this novel form of patent, or how, by the use of general and abstract terms, the specification is made so elastic that it may be construed to claim only the machine, *or so expanded as to include all previous or future inventions for the same purpose.* * * * *In this case we have an attempt to convert an improved machine into an abstraction*, a principle or mode of operation, or a still more vague and indefinite entity often resorted to in argument—*an idea.*"

Claims which describe the operation and effect of a machine have, without exception, been held invalid: *Busch* vs. *Jones*, 184 U. S., 598, 607; *Risdon Locomotive Works* vs. *Medart*, 158 U. S., 68, citing and approving *Mackay* vs. *Jackman*, 12 Fed., 615, and *Brainard* vs. *Cramme*, 12 Fed., 621, and *Gage* vs. *Kellogg*, 23 Fed., 891, and *Hatch* vs. *Moffitt*, 15 Fed., 252, and *Sickles* vs. *Falls Co.*, 4 Blatch., 508, and *Excelsior Co.* vs. *Union Co.*, 32 Fed., 221; *Coupe* vs. *Weatherhead*, 16 Fed., 673; aff'd 147 U. S., 322; *Stokes Co.* vs. *Heller*, 96 Fed., 104; *Dodge Mfg. Co.* vs. *Ohio Works*, 101 Fed., 584; *Dodge Mfg. Co.*, vs. *Collins*, 106 Fed., 935, 937; *Cleveland Co.* vs. *Detroit Co.*, 131 Fed., 740, 742; *Travers*

vs. *Hammock Co.*, 78 Fed., 638; *Wells Glass Co.* vs. *Henderson*, 67 Fed., 930, 935; *American Co.* vs. *Elkhart Co.*, 84 Fed., 960; *Ginsdorff* vs. *Deering*, 81 Fed., 952; *Dick Co.* vs. *Henry*, 160 Fed., 690, 692.

POINT TWO.

Claim 35 of the patent in suit is void because it is indefinite and meaningless and claims nothing.

(Assignment of error 32, supra, p. 12).

Claim 35 reads as follows:

> "35. *IN a sound reproducing apparatus* consisting of a travelling tablet having a sound record formed thereon and a reproducing stylus shaped for engagement with said record and free to be vibrated and propelled by the same, substantially as described."

All that claim 35 does is to describe a sound reproducing apparatus *in* which *something not stated* is to be claimed. Under the decision of this Court in *Merrill* v. *Yeomans*, 94 U. S., 568, 573:

> "The public should not be deprived of rights supposed to belong to it without being clearly told what *it is* that limits these rights."

In Merrill's case the patentee had claimed a process only, and had brought suit alleging that the sale of a product infringed the patent. The Court held that the sale of a product could not infringe a claim for a process and that the patentee's remedy was "by a surrender and re-issue. When this is done, the world will have fair notice of what he claims." Clearly claim 35 claims nothing.

In *Keystone Bridge Co.* v. *Phoenix Iron Co.*, 95 U. S., 274, 278, Mr. Justice Bradley said;—

> "If the patentees have not claimed the whole of their invention, and the omission has been the result of inadvertence, they should have sought to correct the error by a surrender of their patent and an application for a reissue. They cannot expect the courts to wade through the history of the art and spell out what they might have claimed, but have not claimed."

To the same effect is *Hardison* v. *Brinkman*, 156 Fed., 962, 967 (C. C. A.).

In *Cincinnati Co.* v. *American Co.*, 143 Fed., 322, 325, the Circuit Court of Appeals said;—

> "The law requires the patentee to define in his claim *precisely* what his invention is. This Crosby has done, and the Court has no power to disregard the plain terms of the claim and either change or enlarge it by a reference to the specification. Merrill v. Yeomans, 94 U. S., 568, 573; Keystone Bridge Co. v. Phoenix Iron Co., 95 U. S., 274, 278; White v. Dunbar, 119 U. S., 47, 51; McCarty v. Lehigh Valley R. R. Co., 160 U. S., 110, 116; Penfield v. Potts, 126 Fed., 475."

POINT THREE.

Claims 5 and 35 of the patent in suit are void because anticipated by British Patent No. 1644 of 1878 to Edison, and for lack of invention in view of the prior art.

(*Assignment of errors 10, 17, 26 and 27, supra, p. 12*).

It has been shown (*supra*, pp. 16-23), that in 1878 Edison described and patented in U. S. patent No. 200,521 of February 19, 1878 and in Brit-

ish patent No. 1644 of 1878, the following important features in the art of recording and reproducing sound;—

(*a.*) The *recording* of sound-waves upon *cylindrical* and flat or *disc* surfaces, (1) in *spiral* grooves of *lateral* undulations and uniform depth, forming the *zigzag* record, and (2) in spiral grooves of *vertical* undulations and uneven depth.

(*b.*) The *duplication* or multiplication of copies of such sound records by the stereotype and the electrotype processes.

(*c.*) *Machines* for use in *recording* such sound records and for use in *reproducing* sound therefrom.

It has also been shown (*supra*, pp. 19-20), that in and by said United States and British patents of 1878, Edison made it known that in *recording* sound records, it was necessary, in order to produce a sound record consisting of a spiral groove and not simply of a circular groove or straight line, to employ suitable feeding mechanism, operating to feed the vibrating recording stylus to the recording surface, or *vice versa;* but that in *reproducing* sound from a sound record, consisting of a spiral groove, such feed mechanism could be *dispensed* with, since the spiral groove constituting the sound record would, when caused to revolve, not only *vibrate* the reproducing stylus, but also *guide and propel* it across the face of the record, toward and from the center of the disc, as the stylus traveled in and along the revolving, spiral, record-groove.

Obviously, and as shown by Edison in said patents of 1878, a machine adapted for recording

sound in a spiral groove was also adapted for reproducing sound from such spiral groove when recorded. Such machines of the *disc* type Edison illustrated in Figs. 1-11 (T., p. 484) and of the *cylindrical* type in Figs. 12-15 (T., p. 485) of British patent No. 1644 of 1878.

As shown in Figs. 1, 2 and 11, Edison fed the vibrating, *recording* stylus to the recording surface by means of a pin connected with the recording stylus and traveling in and along a spiral guide-groove 3 located either upon the recording tablet, as shown in Fig. 2, or upon a separate disc beneath the recording tablet and revolving therewith upon the same shaft, as shown in Fig. 11. Substantially this same form of apparatus for feeding the vibrating, *recording* stylus to the recording surface was described by Edison in U. S. patent No. 200,521, of February 19, 1878 (T., p. 336) as follows;—

> "It is *obvious* that *many forms* of mechanism may be used to give motion to the material to be *indented*. For instance, *a revolving plate* may have a volute *spiral* cut both on its upper and lower surfaces, on the top of which the foil or indenting material is laid and secured in a proper manner. A two-part arm is used with this *disk*, the portion beneath the disk having *a point in the lower groove*, and the portion above the disk carrying the speaking and receiving diaphragmic devices, *which arm is caused, by the volute spiral groove upon the lower surface, to swing gradually from near the center to the outer circumference of the plate as it is revolved, or vice versa*."

Clearly the mode of operation of the Edison-Sue-s sound reproducing apparatus shown by Berliner in Fig. 3 of the patent in suit (T., p. 454) is

precisely the same as that of the guide-pin traveling in and along the spiral guide-groove 3 shown by Edison in Fig. 2 of the British patent of 1878 (T., p. 484). In each a point or stylus, carried at the free end of a pivoted arm, travels in and across a spiral groove. Whether the groove is a record-groove or a plain groove is immaterial. When the record-groove was once obtained, it took the place of the guide-groove which was necessary only in recording a spiral record-groove. No invention could be involved in first using the plain groove to guide the point traveling in it, while recording, and then, in reproducing, after the spiral groove of the record had been made, in using the spiral record-groove for the same purpose, the guiding of the stylus, for which the plain groove had been used. If there was invention in so doing, Edison and not Berliner disclosed it.

As shown in Figs. 6-10 and in Figs. 12-15 of British patent No. 1644 of 1878, a feed-screw or similar feed mechanism might also be employed for feeding the vibrating, *recording* stylus to the recording surface.

The employment of a spiral guide-groove or of a feed-screw for the purpose stated in a sound *recording* machine was a mere adoption, without invention, of the same devices previously employed for a like purpose in machines receiving and recording *telegraphic messages*, as shown in U. S. patents No. 191,464 of May 29, 1877 to Pickering (T., p. 331); No. 213,554, of March 25, 1879 to Edison (T., p. 337); No. 238,929 of March 15, 1881 to Leggo, Fig. 2 (T., p. 352); No. 277,349 of May 8, 1883 to Rogers, Fig. 1 (T., p. 357); and No. 295,219 of March 18, 1884 to Amsterdam, Fig. 2 (T., p. 378). That the mode of operation of a

sound recording machine, employing the above described guide-groove and pin traveling therein, was nothing but the mode of operation of previously existing machines adapted to receive and record telegraphic messages, appears also from Edison's reference to his said patent No. 213,554, of March 25, 1879 for automatic-telegraph, application filed March 26, 1877 (T., p. 337), made in his fundamental U. S. patent No. 200,521 of February 19, 1878, for improvement in phonograph or speaking machines, as follows (T., p. 336);—

> "An apparatus of this general character *adapted* to a magnet that indents the paper is shown in my application for a patent, No. 128, filed March 26, 1877; *hence no claim is made herein to such apparatus, and further description of the same is unnecessary.*"

Although a spiral guide-groove or feed-screw was necessary in *recording* sound waves in a *spiral* groove, nevertheless, when once the spiral groove, constituting the sound record, had been made, it was obvious that the auxiliary spiral guide-groove or feed-screw could be dispensed with in a machine employed for *reproducing* sound from a record consisting of a spiral groove, because in the reproduction of sound from such a record, the spiral groove of the record would take the place of, and perform the function performed by, the spiral guide-groove of the recording-machine, namely, the feeding of a stylus, traveling in and along it, across the face of the record and toward or from the center thereof. *Not only was this obvious, but Edison actually did it and disclosed it in Figs. 34 and 37 of British patent No. 1644 of 1878* (T., p. 486), which will presently be considered.

Clearly when a sound recording machine was employed for *reproducing* sound from a record consisting of a spiral groove, the auxiliary spiral guide-groove or feed-screw *ceased* to perform any function other than that of continually *permitting* the reproducing stylus to be in a position, relative to the record-groove, where it would be at all times "free to be vibrated and propelled" by the revolving record-groove, the undulating walls of the record groove itself causing the stylus, traveling in it, to vibrate and guiding and propelling the stylus along the groove. So far as the freedom of a reproducing stylus "to be vibrated and propelled" by the record groove was concerned, it made no difference whether that freedom was obtained by the use of a *pivoted arm* free to move laterally, or by the use of an arm similarly pivoted and connected with *a guide-groove or feed screw*. This identity of function in the pivoted arms of the machines referred to was, as stated, first described by Edison in British patent No. 1644 of 1878. *For this reason claims 5 and 35 of the patent in suit were anticipated by Figs. 1, 2 and 11, as well as by Figs. 34 and 37 of British patent to Edison No. 1644 of 1878.*

The instrument or portion of the instrument, consisting of the diaphragm and recording stylus that *records* sound, Edison termed a "*phonograph.*" The instrument or portion of the instrument, consisting of the diaphragm and reproducing stylus, that *reproduces* the sound from the record, he termed a "*phonet.*" The sound record he termed a "*phonogram*" (T., p. 475). The mounting and movement of the recording stylus and of the repro-

ducing stylus Edison stated as follows (T., p. 473, lines 7-11);—

> "the phonograph is on *an arm that swings towards and from the center of the disc*, and is guided by *grooves* or other convenient mechanism. The phonet device takes the place of the phonograph device when the sounds are to be reproduced."

The *swinging arm*, carrying the phonograph with its recording stylus or the phonet with its reproducing stylus, Edison described as follows (T., p. 475, lines 45-48);—

> "The phonograph is upon a lever arm *i* pivoted at 5 to the cylindrical stud 6, so that the phonograph may be *raised or lowered vertically*, or *moved horizontally* for a purpose hereafter stated" (see Figs. 1 and 2, T., p. 484).

The swinging lever arm, having such a universal joint permitting the vertical and horizontal movement of the stylus carried by the arm, was, therefore, clearly the invention of Edison. It was subsequently employed by Bell & Tainter and by Suess. Berliner received it from Suess, who got it from Edison.

After describing the recording of sounds by the use of the phonograph, Edison said (T., p. 478, line 1);—

> "I will now describe how the sounds are *reproduced* from the phonogram."

First he described the use of the sound *recording* apparatus for *reproduction* of sound from the record (T., p. 478, lines 1-7) as follows;—

> "If it is desired to reproduce the sounds from the phonogram *in the same instrument* in

> which the phonogram was produced it is only necesary that *the indenting point c be made to traverse the line of indentations* in the phonogram, and that a *funnel-shaped mouth-piece*, shown by dotted lines in Fig. 1, be added to the phonograph to aid in increasing the loudness and distinctness of the sound. The instrument in this form I term a 'phonet.' "

The vertical "funnel-shaped" mouth-piece is the *horn* used to-day in the Suess machine shown by Berliner in Fig. 3 of the patent in suit (T., p. 454). Suess arranged the horn horizontally instead of vertically.

Then Edison said (T., p. 478, line 36);—

> "I will now briefly describe some *modifications* in the construction and operation of the phonograph and *phonet*."

Fig. 34 he described as follows (T., p. 479, line 48);—

> "Fig. 34 is a perspective view showing a double *phonet*, there being a *spiral* line of indentations on each side of the *revolving disk d*, one phonet coming into action as the other finishes; in this case the spirals should be in opposite directions, *so that the disk continuing to revolve in the same direction moves one phonet from the center outwards*, and *then the other phonet is connected and moved back towards the center;* this may be used as a toy."

All machines, adapted for *reproducing only*, are used as toys for purposes of amusement only. Complainants' and defendant's machines are toys. They cannot be used for commercial purposes, such as dictation, since, like Fig. 34, they cannot be used for recording.

Fig. 37 Edison described as follows (T., p. 480, line 11);—

"Fig. 37 represents the phonograph or *phonet* upon a *pivoted arm, so that it may swing across* or *at right angles* to the line of movement of the intended (indented) material or phonogram. In this case the line of indentations may be lengthwise of the belt, or *across the same in the arc of a circle.*"

The sound reproducing apparatuses shown in Figs. 34 and 37 are claimed by Edison in *the first and tenth claims* of British patent No. 1644 of 1878, which claims read as follows (T., p. 482);—

"First. The combination with the *diaphragm* and *point* of a *flat* receiving surface, and means for *revolving* the receiving surface, and *causing the point to follow a volute or spiral line*, substantially as represented in Figs. 1, 2, 6, 7, 8, 9, 10, 15 and *34*.

"Tenth. The mechanism for producing a phonogram and employing the same in a *phonet*, substantially as described, and illustrated in Figs. 32, 33, 35, 36 and *37*."

The above quoted descriptions of Figs 34 and 37 and the first and tenth claims of the Edison British patent of 1878 clearly set forth the elements of claims 5 and 35 of the patent in suit. For comparison claims 5 and 35 are here set forth;—

"5. The method of reproducing sounds from a record of the same which consists in *vibrating* a stylus and *propelling* the same *along* the record by and in accordance with the said record, substantially as described.

"35. In a sound reproducing apparatus consisting of *a travelling tablet* having a sound record formed thereon and *a reproducing stylus* shaped for engagement with said record and *free to be vibrated and propelled* by the same, substantially as described."

Unquestionably the devices shown in Figs. 34 and 37 would infringe claims 5 and 35 of the patent in suit; hence they would anticipate, under the well settled rule that "*that which infringes if later, would anticipate if earlier*" (*American Co.* v. *Streat*, 83 Fed. 700, 706, citing *Heating Co.* v. *Burtis*, 121 U. S., 286,295; *Grant* v. *Walter*, 148 U. S., 547, 554; *Gordon* v. *Warder*, 150 U. S., 47).

Where a prior patent *discloses the principle and mode of operation* of the device of a later patent, the prior patent anticipates the later patent (*Van Epps. v. United Co.*, 143 Fed. 869, 874, citing *Pickering v. McCullough*, 104 U. S., 310, 319, where the prior device was not successful; *Watrous Co. v. American Co.*, 161 Fed. 362, 364; *Brunswick Co. v. Backus Co.* 153 Fed. 288).

Edison shows "*a travelling tablet having a sound record formed thereon*" in the revolving disc of Fig. 34 having a spiral line of indentations, constituting a spiral record-groove, formed on each side thereof, and in the moving belt of Fig. 37 having either a spiral groove when the indentations cross the belt in the arc of a circle, or a circular record-groove, when the indentations are lengthwise of the belt. Edison also shows "*a reproducing stylus shaped for engagement with said record*," the phonets *aa* of Fig. 34 and the phonet *a* of Fig. 37 consisting, as described in the patent, of the diaphragm and reproducing stylus, constituting the same. The stylus is, moveover, "*free to be vibrated*" by the record-groove as described throughout the patent. The stylus is, furthermore, "*free to be propelled*" along the record, *by* and in accordance with the record. With reference to Fig 34, Edison says in the above quoted description thereof, that the re-

volving disc, having a spiral record-groove formed upon each side thereof, "*moves first one phonet from the center outwards and then the other phonet is connected and moved backward towards the center.*"

The mode of operation is clearly shown in Fig. 34. The arm carrying the phonets *aa* slides upon the rod supporting it. The reproducing stylus of one phonet *a* being in engagement with the record-groove, *the revolving disc*, as stated by Edison, "moves one phonet from the center outwards and *then* the other phonet is connected and moved backward towards the center." It is the *revolving record disc* that moves the phonet toward and from the center by reason of the pressure exerted by the walls of the spiral record-groove upon the point of the reproducing stylus. The mode of operation is precisely the same as that explained by Edison in describing the action of the spiral guide-groove 3 of Figs. 1, 2 and 11, which causes the guide-pin traveling therein to be propelled along the groove and across the face of the record tablet (T., p. 476, lines 18-22). In Figs. 1, 2 and 11, the movement of the guide-pin in the guide-groove 3 is necessary, in *recording*, to enable the *recording* stylus, with which the guide-pin is connected, *to record* the sound-waves in a *spiral* record-groove; but in Fig. 34, it is the spiral groove of the *sound-record itself* which vibrates the *reproducing* stylus and *propels* it along and across the face of the record, *independently of other means.* So also, in Figs. 1, 2 and 11, when used in *reproducing*, it is the spiral groove of the *sound record itself* which *vibrates* the reproducing stylus and propels it along and across the face of the record, for in *reproducing* the movement of the reproducing stylus is

caused *solely* by the revolving spiral record-groove itself, the movement of the pin in the spiral guide-groove leaving the stylus "*free to be propelled*" by the record-groove, but not propelling it, as above explained (*supra*, pp. 69-70).

Precisely the same function is performed by the arrangement shown in Fig. 37 as by that shown in Fig. 34. The stylus is "*free to be propelled*" along the record-groove, *by* and in accordance with the record-groove. The stylus is carried at the end of a *pivoted arm* so that it may *swing across*, or at *right angles* to, the line of movement of the traveling record-groove. In case the record-groove is lengthwise of the belt, the stylus carried by the pivoted arm will simply vibrate as it travels in and along the said record-groove, but in case the record-groove is, as stated, across the traveling belt in the arc of a circle, forming a spiral record-groove, as upon a cylinder, then the stylus, being carried by a *pivoted* arm, "*swings across*" the face of the belt and record as it travels in and along the spiral record-groove, the pressure of the walls of the record-groove itself upon the point of the stylus moving the phonet in the manner stated, *independently of other means.*

Figs. 34 and 37 and Edison's description thereof are, therefore, clear anticipations of claims 5 and 35 of the patent in suit. According to complainants' expert (T., p. 58), the alleged

> "distinction of the invention of the patent in suit over the prior art is in the manner of the *propelling* of the stylus across the record, which is not accomplished by an auxiliary feed-screw, but is due to the operating engagement of the stylus point with the *record-groove itself*, independently of other means."

This defense, which was not raised in the prior suit, was not open to this petitioner in the courts below, because the Edison British patent No. 1644 of 1878 had been dead wood in the record of the prior suit. Judge Townsend said (T., p. 327);—

> "The defence founded on the prior Edison patent will not be discussed because said patent was before the court in the original suit."

The defence is good and valid and should have been considered and decided on its merits by the courts below under the rule stated by this court in *Mast, Foos & Co.* v. *Stover Mfg. Co.*, 177 U. S., 485, as follows;—

> "Comity has no application to questions *not considered* by the prior court, or, in patent cases, to alleged anticipating devices which were not laid before that court. As to such the action of the Court is purely original."

Whether the defendant, the American Graphophone Company, in the prior suit was not aware of the contents of the prior Edison British patent, or refrained from acquainting the courts therewith, in a suit where, according to the sworn statement of its counsel (*supra*, p. 5), it was to the interest of that defendant *to lose*, is immaterial. The defence was not, in fact, raised in the prior suit, and being a defence that completely overthrows claims 5 and 35 of the patent in suit, it should, when urged in this suit, have been considered and decided on its merits by the Courts below. The sole use made in the prior suit by counsel for the American Graphophone Company, of the Edison British patent was to cite Figs. 1 and 2 thereof in support of their contention, hereinafter considered under Point Four (*infra*,

p. 80), that the Bell & Tainter patent No. 341,-214 (T., p. 387) was an anticipation of claims 5 and 35 of the patent in suit.

Claims 5 and 35 of the patent in suit are void because Edison anticipated the method and apparatus thereof. Berliner did not invent the form of sound-reproducing apparatus shown as a whole in Fig. 3 of the patent in suit, for such, concededly, was the invention of Suess. Berliner made an impractical and unsuccessful sound-reproducing apparatus upon the basis of Edison's prior disclosures, and he cannot, under well settled rules of law, claim the broad invention which belonged to Edison, but must be limited (Railway Co. v. Sayles, 97 U. S., 554) to the specific form of apparatus which he disclosed in Fig. 10, of U. S. patent No. 584, 586, of July 28, 1896, applied for November 7, 1887 (T., p. 465). This matter is discussed under Point Five (*infra*, p. 96), where it is shown that Edison having made the broad invention, and Berliner and Suess having made modifications thereof, Berliner and Suess can, under the repeated decisions of this court, claim only the specific forms devised by them. *Berliner's form never went into use.* Suess' form, which did go into use, differs from Edison's in details only. Defendant employed the Suess form only.

Even if Edison had not shown, in Figs. 34 and 37, that in the reproduction of sound from a spiral record-groove the guide-pin, traveling in and along the guide-groove 3 of Fig. 2, could be dispensed with, it would still be true that claims 5 and 35 of the patent in suit are void for lack of invention in view of the prior art, since *it obviously required no invention*, when a spiral record-groove had once been obtained, *to dispense, in reproducing, with the*

guide-pin moving in the spiral guide-groove which was useless in reproducing and useful only in recording. In other words, the spiral record-groove being precisely like the spiral guide-groove, it could require no invention to use the spiral record-groove in reproducing for the same purpose that the spiral guide-groove had been used in recording, namely, to guide the reproducing stylus as it traveled in and along the record-groove. In fact, whether the guide-pin traveling in the guide-groove was retained or not retained in reproducing, it was the spiral record-groove that alone vibrated and propelled the reproducing stylus. The decision of this court in *McClain* v. *Ortmayer*, 141 U. S., 419, affirming 33 Fed. 284, is in point. There Judge Blodgett held, as stated in head note 2, as follows (33 Fed. 284);—

> "A patent obtained upon a device, upon which a patent had already been obtained, in combination with another exactly similar but *unnecessary* device, *which it required no invention to dispense with, there being no material difference in the mode of operation and result*, presents no patentable novelty, and for that reason is void."

Defendant's expert, Mr. Goss, has dealt with Fig. 34 of the Edison British patent of 1878 (T., pp. 300-303), showing, as above shown, that it is a clear anticipation of claims 5 and 35 in suit.

POINT FOUR.

Claims 5 and 35 of the patent in suit are void because anticipated by U. S. Patent No. 341,214 of May 4, 1886, to Bell & Tainter or by British Patent No. 6027 of May 4, 1886, to Johnson for the same Bell & Tainter invention and for lack of invention in view of the prior art.

(*Assignment of errors 10, 26 and 27, supra, p. 12*).

It has been shown under Point One (*supra*, p. 45) that the alleged novelty and patentability of the method and apparatus of claims 5 and 35 of the patent in suit rest *solely* upon the *functional* limitation, incorporated in the claims, that the reproducing stylus is "*free to be propelled*" along the record-groove, by and in accordance with the record-groove.

It has also been shown under Point Three (*supra*, p. 65) that claims 5 and 35 of the patent in suit were anticipated by Figs. 34 and 37, as well as by Figs. 1, 2 and 11, of British patent to Edison, No. 1644 of 1878. In that patent Edison, as shown, described and claimed a sound-reproducing apparatus consisting of a traveling tablet having a spiral record-groove formed thereon, in combination with a reproducing stylus shaped for and in engagement with the record-groove and *free to be vibrated and propelled* along the record-groove, by and in accordance with the record-groove.

This freedom of the stylus "to be propelled" along the record-groove, by and in accordance with the record, was the result of *the loose mounting of the reproducer arm* secured, as shown by Edison, either

(*a*) by permitting one end of the arm *to slide* upon its support, as shown in Fig. 34; or (*b*) by *pivoting* the arm at one end so that it was free to swing horizontally, as shown in Fig. 37; or (*c*) by the employment of a *universal joint* for connecting one end of the reproducer arm with its support so that it was free to move vertically and to swing horizontally, as shown in Figs. 1, 2 and 11, of British patent No. 1644 of 1878.

That claims 5 and 35 of the patent in suit were anticipated by Bell & Tainter also, appears from claims 19-23 of U. S. patent No. 341,214 of May 4, 1886 (T., p. 397) and from the identical claims 19-23 of the corresponding British patent No. 6027 of May 4, 1886 (T., p. 505), which claims read as follows:

> "Nineteenth. The combination with the reproducing style, of *a mounting* therefor, *which leaves said style free to move laterally*, and thereby adjust itself automatically to a sound record, substantially as described.
>
> Twentieth. The reproducer *loosely mounted* on a suitable support, *so that the reproducing style is capable of a lateral movement*, and may in consequence thereof adjust itself automatically on the record, substantially as described.
>
> Twenty-first. *The reproducer mounted on an universal joint and held against the record by yielding pressure*, substantially as described.
>
> Twenty-second. The combination, with a *grooved tablet* or other body having a sound record formed therein, of *a reproducer* having a rubbing style *loosely mounted, so that it is free to move laterally*, and thus adjust itself to the groove, substantially as described.
>
> Twenty-third. The combination, with the tablet or other body having the sound record

formed therein as an irregular groove with sloping walls, of *a reproducer* having a style for rubbing over said record and *mounted on an universal joint*, substantially as described."

In the specifications Bell & Tainter described this construction as the fourth part of their invention, saying, in U. S. patent No. 341,214 (T., p. 391, line 84);—

"The invention consists, fourthly in *loosely mounting the reproducing-style so that it can readily be guided by the record.* Preferably the reproducing-style, or rather what may be called the 'head' of the reproducing instrument is mounted on an *universal joint*, and *the style is pressed against the record by the yielding pressure of a spring or weight.* Practically in the instruments made by us the pressure is due to the weight of the instrument, modified by the elasticity of a section of *soft-rubber tube*, which supports the same and *constitutes a universal joint;* but evidently *there are many devices which can be used to mount the reproducer, so that it is free to follow the sound record or phonogram, and which, therefore, would be within the spirit of the invention.* The reproducing-style, *mounted as just explained*, is specially adapted for use in connection with a record in the form of *a groove* with sloping walls, and this combination is specially claimed; but it may also be usefully employed in connection with *other forms* of record."

The records of the patent in suit, being made by a wedge-shaped point (T., p. 455, Fig. 5; p. 462, claim 32), have sloping walls.

As stated, Bell & Tainter showed a *soft-rubber tube*, constituting the *universal joint*, permitting the reproducing stylus to be moved laterally, to be guided by the record-groove, and to follow the record-groove. Such soft-rubber tube, is shown in Fig.

8 of the United States and British patents (T., pp. 387 and 512), wherein K is the reproducer or phonet, consisting of the usual diaphragm 28 and reproducing style 27. The reproducer K is provided with tube 31. A tube 32 of soft, flexible, vulcanized rubber slips over the lower end of tube 31 and connects it with tube 33, thus forming the universal joint. When it is desired to use the apparatus shown in Figs. 1 and 2 for reproducing, instead of for recording, sound, the reproducer K, shown in Fig. 8, is substituted for the recorder H, shown in Figs. 1 and 2, by withdrawing the tube 18 of the recorder from the tube 19 in which it is held, and by inserting the tube 33 connected with the reproducer K in tube 19 (T., p. 394, lines 33-67).

In Fig. 13 (T., p. 388) is shown a modified form of the Bell & Tainter machine wherein the reproducer K and the recorder H[1] are provided with independent supports, the support of the reproducer K being free to swing horizontally, turning in rings of the bracket 72.

The court will understand from the explanation given (*supra*, pp. 19-20), that Bell & Tainter's reproducer K could not be used for recording sound-waves in a spiral record-groove, and that for this reason Bell & Tainter employed, for recording, the recorder H, which was not mounted on a universal joint. The court will also understand, from the same explanation, that in order to record sound-waves in a spiral record-groove, Bell & Tainter were obliged to feed the rotating record-tablet to the vibrating recording stylus, or *vice versa*, as by feed-screw 5 shown in Fig. 1, or by the swinging arm L shown in Figs. 12-14. In reproducing sound from a spiral record-groove, however, Bell & Tain-

ter mounted the reproducing stylus upon a *universal joint*, so that the stylus was *free to be propelled and guided* by the record-groove, was *free to follow* the record-groove, was *free to move laterally*.

In Figs. 12, 13 and 14, (T., pp. 388-389) Bell & Tainter showed a modified form of their sound-recording and sound-reproducing apparatus. The rotating record-tablet, in *recording*, was fed to the vibrating recording stylus by the swinging arm L, in such manner that the recorder engraved a spiral record-groove, the operation being described as follows (T., p. 395, lines 17-23);—

> "As the arbor D, disk E, and tablet F are rotated, the screw 56 turns the shaft 58, and consequently—the worm-wheel 53 being held stationary by the clamp M—the arm L is swung gradually to one side, so that the recorder engraves *a spiral line* on the wax face of the tablet."

The use of the *same apparatus* for *reproducing* they described in words immediately following (T., p. 395, lines 23-28;—

> "When the record has been cut, it is only necessary, in order to restore the tablet to the starting point for reproducing, to draw back the recorder and *to loosen clamp M*, when arm L can be moved at once to the proper position."

It will be noticed that in recording it was necessary that the worm-wheel 53 be held *stationary*, as stated, by the clamp M in order to swing the arm L gradually to one side and thus feed the revolving, recording surface to the vibrating, *recording* stylus. When, however, the apparatus was to be used for reproducing, *clamp M was loosened*, as stated, the sound record-tablet was moved to its proper position, and nothing is said about

tightening clamp M to feed the record-tablet during the process of *reproducing,* because in that process, reliance was had upon the loose mounting of the reproducing stylus by means of a universal joint, so that the stylus should, as they said (*supra*, pp. 81-82), be free to be guided and propelled by the record, free to move laterally, free to follow the record.

With reference to the reproducer K of this modification of their machine (see Fig. 13), Bell & Tainter said (p. 395, lines 57-65);—

> "In this machine the reproducer K, instead of being mounted on the same bracket as the recorder when the latter has been removed, is carried by a separate bracket, 72, *the tube 33 being hinged* thereto, so that the recorder and reproducer remain, or may remain, always attached to the machine, it only being necessary to turn one or the other into position, as may be required."

An inspection of Fig. 13 shows that the reproducer K, connected by the rubber tube 32 to the *hinged* tube 33, was free to move or be propelled laterally, not only because of the rubber tube 32, constituting a *universal joint*, but also because the *hinged* tube 33 *turned*, as stated in the perforated rings of the bracket 72. That Fig. 13, as well as Figs. 8 and 2, discloses a reproducing stylus free to be vibrated and propelled by the spiral-record-groove cannot be denied, and that Bell & Tainter fully and clearly described the method and apparatus of claims 5 and 35 of the patent in suit is beyond question.

The mounting of the reproducer on a laterally-movable, hinged arm, as shown in Fig 13, was claimed by Bell & Tainter as follows (T., p. 397);—

"37. *The reproducer mounted on a hinged arm*, and provided with a sound-conveyer extending lengthwise of said arm, substantially as described.

"38. *The reproducer mounted on a hinged arm*, and provided with a sound-conveyer extending lengthwise of said arm, and connected at the hinge with an exterior sound-conveyer, substantially as described."

Bell & Tainter, moreover, secured *two* lateral movements of the reproducing stylus, *one to permit the stylus to be guided and propelled by the record*, as above described, and the other to permit the stylus to "accommodate itself" to the record without movement of the diaphragm and other parts of the reproducer. This is stated in the British patent (T., p. 489, lines 23-31) as follows;—

"*The reproducing style should be mounted so that it can readily be guided by the record.* This may be accomplished in different ways as for example by *mounting* the head of the *reproducing instrument* upon a *joint* which admits of a *lateral movement*, or the *style* may be so mounted as to be capable of a lateral movement *independently* of a diaphragm and other parts of the reproducer—*By this latter arrangement* the style can *accommodate itself* to the record without having put in motion the larger mass of the head of the reproducer. It therefore responds more quickly—*Both* arrangements will be illustrated."

By the employment of the *universal joint*, the rubber tube of the first arrangement, freedom of the stylus to be guided and propelled by the spiral record-groove of the *disc* record was secured.

The mere accommodation of the stylus to the record-groove of a *cylindrical record*, without movement of the diaphragm and other parts of the re-

producer, was secured by fastening the reproducing stylus to the end of a thin, flexible, metal strip. Such mounting of the reproducing stylus is independent of the universal joint and is referred to in the description of the cylindrical record, in the British patent (T., p. 500, lines 7-11), but not in the United States patent, where only the *disc* form of record and machine is described. In the United States, Bell & Tainter obtained a separate patent, No. 341,288 (T., p. 399), covering the mere accommodation of the reproducing stylus to the record-groove of a cylindrical record (T., p. 406, lines 28-95, etc.).

This statement in the British patent, which was not in evidence in the prior suit (T., p. 78, fol. 234), of the *two* arrangements employed by Bell & Tainter for the mounting of the reproducing stylus, is a complete answer to complainants' contention that Bell & Tainter had in mind only the *second* arrangement which permits the stylus to accommodate itself to the record groove. Claims 21 and 23, above quoted, broadly cover the universal joint of Fig. 3 of the patent in suit and for the same purpose, to permit the stylus to be vibrated and propelled by the revolving spiral record-groove, or as Bell & Tainter said "*to be free to follow the sound-record*" (*supra*, p. 82).

It is important to bear in mind the distinction made between sound recording and sound reproducing machines, the distinction being (*supra*, pp. 19-20) that in a sound recording machine a feed-screw or equivalent device is necessary to enable the vibrating, recording stylus to record sound-waves in a spiral record-groove, and not necessary in a sound reproducing machine to enable the reproducing stylus to follow the record-

groove, since the reproducing stylus is vibrated, guided and propelled solely by the walls of the record-groove in and along which it travels.

If the reproducing stylus were not *propelled* solely by the record-groove, across the record-tablet, it could not be vibrated, as it is, *solely* by the record-groove. The record-groove propels the stylus at the same time that it vibrates the stylus, and this has been known in the art since Edison's British patent of 1878.

Because Judge Hazel's attention was not directed in the prior suit to this clear distinction, he fell into an error when he said that the difference between the Berliner machine and the machine of Bell & Tainter was that (T., p. 68);—

> "In the latter, an auxiliary joint or feed-screw was necessary, as already stated, to effectuate the required passage of the record over the point of the stylus, or to cause the stylus and *reproducing* diaphragm to travel across the surface of the record."

This was the distinction between sound *recording* and sound *reproducing* machines, but it was *not* the distinction between the sound reproducing machines of Berliner and Bell & Tainter. On the contrary, Bell & Tainter expressly stated that the *reproducing* stylus, not the *recording* stylus, was loosely mounted, as by the employment of a *soft rubber tube* forming a *universal joint*, so that the stylus was free to be guided by the record, to move laterally, to follow the record.

Within the meaning of claims 5 and 35 of the patent in suit Bell & Tainter disclosed a traveling tablet having a spiral record-groove formed thereon and a reproducing stylus shaped for and in engagement with the spiral record-groove, the

stylus being free to be vibrated and being mounted, by means of a universal joint, so as to be free to be propelled along the record, by and in accordance with the record.

The fact that Bell & Tainter pointed out how a reproducing stylus mounted by means of a universal joint could be adapted for use in the machine employed for recording, by substituting the reproducer so mounted for the original recorder, is utterly immaterial. When the reproducer was substituted and the machine was used for reproducing, the stylus was not only "*free to follow the sound-record*" and *free* to be vibrated and propelled "*along*" the record-groove by and in accordance with the record-groove, according to the limitations of claims 5 and 35 of the patent in suit, but it was *actually* vibrated and propelled along the record-groove by and in accordance with the record-groove. The universal joint permitted the stylus to move laterally, to follow and to be guided by the record, as Bell & Tainter expressly stated (*supra*, p. 82), and the walls of the record-groove alone vibrated and propelled the stylus so that as the stylus vibrated it followed "*along*" the spiral line of the record-groove and moved across the face of the record-tablet. In reproducing, the feed mechanism necessary in recording might be dispensed with if desired in the Bell & Tainter machine as above pointed out (pp. 84-86) in describing Figs. 13, 14 and 15 of the patent: *but whether the feed mechanism was dispensed with or retained and used during the operation of reproducing, the only effect of the feed mechanism was, so to move the revolving record-tablet or the reproducer arm, that the stylus mounted upon the universal joint was at all times free to be vibrated and propelled by the revolving, spiral, record-groove.*

In other words, the limit of the flexibility of the rubber tube, *if a short tube was used,* would not be reached as the spiral record-groove propelled the stylus across the rotating record-tablet.

Claims 5 and 35 of the patent in suit are not limited by a swinging arm capable, *without movement of its pivot,* of permitting the record-groove to move the stylus *entirely* across the face of the record. The swinging arm of Fig. 3 of the patent in suit was derived by Berliner from Suess who derived it from Edison (*infra*, p. 96). Berliner did not show a swinging arm in his device of Fig. 10 of patent No. 564,586 (T., p. 465) upon which his claim to invention solely rests.

There is no limitation in the claims that the vibrating and propelling of the stylus is to be accomplished without a feed-screw. The claims are for a stylus free to be vibrated and propelled by the record groove. *The Bell & Tainter patent is, therefore, a complete anticipation. "To imply as elements of a claim parts not named therein for the purpose of limiting its scope, so that it may be accorded novelty, is contrary to a well settled rule of patent law" (McCarty v. Railroad Co.*, 160 U. S. 110, 116 and *F. B. Stearns & Co. v. Russell*, 85 Fed. 218, 224, C. C. A.).

The claims are explicit, broadly claiming *such freedom* of the stylus, irrespective of the *means* by which it is obtained. The means *shown* in Fig. 3 (T., p. 454), were the means of Suess (*infra*, p. 96), and of Edison (*supra*, p. 65).

Where a claim is thus explicit, the courts cannot alter or change it and the claim must be held invalid if anticipated when construed according to its clear language (*Keystone Co. v. Phoenix Co.*, 95 U. S., 274, and *McClain v. Ortmayer*, 141

U. S. 419, cited and applied in 151 Fed. 23 and 161 Fed. 112 and 154 Fed. 669 and 143 Fed. 325). The court cannot rewrite the claims. As shown under Point Eight (*infra*, pp. 170-174), Berliner intended claims 5 and 35 to cover the propelling of the stylus by the record in reproducing whether the feed-screw or other like mechanism was dispensed with or not and such is the meaning of the claims. Such also is complainants' contention, though they may now deny it, as will be seen from Judge Hough's opinion in *Victor Talking Machine Co., et al. v. Hoschke*, 158 Fed. 309, where these complainants contended and Judge Hough held that, under the decisions upon claims 5 and 35 of the patent in suit, a machine employing a *spring* acting on the reproducer arm to propel it across the face of the record-tablet while the stylus was vibrated and propelled by the revolving spiral record-groove was an *infringement*. To such an extent have these functional claims been applied by the courts below to sound reproducing apparatus of the prior art.

Claims 5 and 35 of the patent in suit broadly claim the function of a stylus free to be vibrated and propelled, and in any view of the case they are anticipated, because not only was that function accomplished by the machines of the prior art, but it was accomplished in precisely the manner described in the patent in suit. A universal joint, consisting of a flexible tube of soft rubber, would permit the stylus to be guided and propelled by the record-groove *entirely* across the record-groove, as shown in Suess' reproducing apparatus of May, 1888 (T., p. 269 and p. 270, fol. 809), *but it can make no difference whether the length of the rubber tube was such as to permit the reproducing*

stylus to be guided and propelled a distance of half an inch or a distance of two inches, for in either case the terms and the substance of claims 5 and 35 are met; and *still further* can it make no difference if the reproducer arm or revolving record-tablet was fed along in order to permit the stylus mounted on such a universal joint at all times to be free to be vibrated and propelled by the record from the beginning to the end of the reproduction of sound from the record. This whole matter was thoroughly understood by Bell & Tainter, as testified to by Dr. Bell (T., p. 306, Q. 9) and by defendant's expert, Mr. Goss (T., p. 300), and as appears from the Bell & Tainter patent.

The result of connecting Bell & Tainter's flexible tube of soft rubber, constituting a universal joint, with an arm or tube that was fed, or of feeding the revolving record tablet, was to enable Bell & Tainter to employ a reproducer arm of *less length* than that of the arms shown by Edison in Figs. 1, 2, 11, 34 and 37 of British patent No. 1644 of 1878; but whether the feed took place or not, the function of the universal joint remained the same—the reproducing stylus was, by reason of the universal joint, free to be vibrated and propelled by the spiral record-groove. Since the expiration of Edison's prior British patent of 1878 and of Bell & Tainter's prior patents of 1886, such universal joint in a sound-reproducing apparatus has been *public property* and every one is at liberty to use it for every purpose for which it is adapted.

The Bell & Tainter U. S. patent No. 341,214 was a patent of great importance and was frequently considered and passed upon by the courts.

In *American Graphophone Co. v. Amet*, 74 Fed. 789, Judge Grosscup held, as stated in head note

2, that letters-patent, No. 341,214, issued to Bell & Tainter, May 4, 1886, for an improvement in recording and reproducing speech and other sounds,

> "*is infringed by a device in the essential characteristic of a loose joint, so as to enable the style to follow the groove of the record.*"

In the course of his opinion, after quoting claims 22 and 24, Judge GROSSCUP said (pp. 790-791);—

> "It will be seen that, in order to follow the groove accurately, the reproducer must be loosely mounted, and this is accomplished by the *universal joint* described in the patent. Much stress was laid by counsel for complainants upon the patentability of *the adaptation of this universal joint to the purpose of a graphophone.* If the validity of the patent depended upon this contention, I would be disposed to hold against it, *for I can see nothing novel about the joint, except its new use;* and such adaptation to new use is not, in my judgment, patentable invention. But while this element, separately considered, is not invention, the *combination* which embraces it, in my judgment, is."

Such *combination* having been patented first by Edison and then by Bell & Tainter, how can the later claims 5 and 35 of the patent in suit be valid?

Although Judge GROSSCUP considered that no invention resided in the *new use* of the universal joint, he held the combination of a reproducing stylus, mounted by means of a universal joint, and a grooved sound-record tablet of wax-like material patentable, *only because the record-tablet was composed of Bell & Tainter's new patentable, wax-like, recording material* (p. 790). The machine which Judge GROSSCUP held to be an infringement of the Bell & Tainter patent employed a reproducing stylus mounted upon a swinging arm connected by a

universal joint with its support and *permitting the stylus to be vibrated and propelled by the rotating record-groove in the manner of the patent in suit.*

In *American Graphophone Co.* v. *National Gramophone Co.*, 90 Fed., 824, Judge LACOMBE held that claim 21 of the Bell & Tainter patent for

> "(21) The reproducer, *mounted on a universal joint and held against the record by yielding pressure*, substantially as described",

was infringed by the apparatus of claims 5 and 35 of the patent in suit. Judge LACOMBE pointed out that the Bell & Tainter patent covered, in the combination of claim 21, sound records of *lateral*, as well as of vertical, undulations. The Circuit Court of Appeals in the same case, however, taking, apparently, Judge GROSSCUP'S view of the scope of the Bell & Tainter patent, held (92 Fed., 364) that inasmuch as Berliner's record consisted of *hard rubber*, and since Bell & Tainter's record consisted of a new *wax-like material*, a preliminary injunction should not have been granted by Judge LACOMBE until the status of a hard rubber record in the combination of claim 21 had been determined at final hearing. The Circuit Court of Appeals did not dissent, however, from Judge LACOMBE'S holding, that the mounting of the reproducing stylus of the Berliner machine, so that it should be free to be guided or propelled by the record-groove of a lateral or zigzag record was the same as that specified in the Bell & Tainter patent.

In *American Graphophone Co.* v. *Leeds*, 87 Fed., 873, Judge SHIPMAN held that a machine similar to the machine in the *Amet* case, *supra*, infringed claims 19-24 of the Bell & Tainter patent. Judge SHIPMAN said (p. 878) that the stylus was carried

by a reproducer arm swinging laterally by reason of a universal joint, being guided solely by the record-groove.

It should be remarked that in the cases above cited, stress was laid upon the feature disclosed in the Bell & Tainter patent, that the stylus pressed against the record by reason of the weight of the reproducer. Although this element is shown in the Suess machine illustrated in Fig. 3 of the patent in suit (T., p. 454), it is not shown in Fig. 10 of Berliner's patent No. 564,586, of July 28, 1896, applied for Nov. 7, 1887 (T., p. 465), upon which Berliner's claim to invention *solely* rests. In this we have an additional reason why Berliner, being one of several subsequent workers along the line of Edison's broad invention of 1878, must be limited to the specific device invented by him, namely, the impractical and discarded apparatus of Fig. 10 of patent No. 564,586. As hereinafter explained (*infra*, pp. 101-102), Berliner's reproducer of said Fig. 10, being suspended by means of wheels, resting on a horizontal rod, is *incapable of vertical adjustment* and cannot rest or press by gravity upon the record-groove, so that Berliner's stylus of Fig. 10 will leave the record-groove or the wheels will be thrown from the horizontal rod in case the revolving record-tablet warps or rises and falls in its revolution, as it always does (*infra*, p. 112).

The *disc* record and the *disc* machine were described by Bell & Tainter as the preferred form of record and machine in both the United States (T., p. 393, line 27) and British patents; but in the British patent the cylindrical record and the cylindrical machine were also described and shown in Figs. 22-38 (T., pp. 513-515). In the United States patent (T., p. 392, line 1) and in the British patent (T., p. 489, line 50) Bell & Tainter stated that

the reproducing stylus, mounted by means of a universal joint, may be usefully employed in connection with the various forms of records, including, as Judge LACOMBE held, the well known records of lateral undulations and uniform depth, disclosed by Edison in 1878 (*supra*, pp. 17-19).

POINT FIVE.

Claims 5 and 35 of the patent in suit are void because anticipated by Werner Suess, and for lack of invention in view of the prior art.

(Assignment of Errors 10, 11, 26 and 27, supra, p. 12).

This defence rests upon the three following documents;—

1. U. S. patent No. 427,279, of May 6, 1890 to Suess, assignor to Berliner (T., p. 446).

2. Canadian patent No. 41,901 of February 11, 1893, applied for May 5, 1891, to Berliner, as assignee of Suess (T., p. 155 and p. 169, fol. 507).

3. Berliner's lecture before the Franklin Institute of May 16, 1888, acknowledging Suess to be the inventor (T., p. 245; p. 269, Figure of "Reproducing Apparatus, May, 1888", p. 270, fol. 809).

The drawings of said Suess-Berliner Canadian and United States patents being identical, the drawings of the United States patent (T., p. 446) are to be used in connection with the Canadian patent (stipulation, T., p. 541, fol. 1621). Judge Townsend found (T., p. 324);—

> "This (Canadian) patent discloses and *broadly claims* the invention covered by the claims here in suit."

Judge Townsend also found (T., p. 325);—

> "But the Canadian patent in terms *describes and claims the broad generic invention* of Berliner covered by the claims here in suit."

The Circuit Court of Appeals was of the same opinion, saying;—

> "Of course if the Canadian patent expired, the United States patent expired at the same time" (petition for writ of *certiorari*, p. 42).

Berliner's claim to the *alleged* "broad generic invention" covered by the claims here in suit, rests solely upon Fig. 10 and the description thereof to be found in U. S. patent No. 564,586 of July 28, 1896, issued to Berliner upon an application filed November 7, 1887 (T., p. 466).

In that patent Berliner first describes the drawings showing his *apparatus* (p. 467, line 7, to p. 468, line 54). He then describes the deposition of a suitable *layer of ink* upon the tablet and the making thereon of a phonautographic record by *recording* and the *copying* of that record by photo-engraving (p. 468, line 55, to p. 469, line 45). He then describes the *centering of the copied record* upon its support (p. 469, lines 46-80). Berliner then, referring to Fig. 1, states that

> "*the stylus is then adjusted with its point in engagement* with the outer end of the record groove and the weight 26 is allowed to descend. It will now be clear that *the stylus will be forced positively to follow the undulations* of the record and that the diaphragm vibrating under the stylus will emit the same sounds which produced the original record, which sounds can be distinctly heard at the ear-piece 34" (p. 469, lines 80-89.)

Having thus described his invention, Berliner in the next line says;—

> "Both the process and the apparatus thus far described may be *modified* in various ways *without departing from the main features of* my invention" (p. 469, lines 90-94). This he shows in Fig. 10.

From Berliner's foregoing statements, it appears that in Fig. 1, as well as in Fig. 10, the *reproducing* stylus was forced by the walls of the record-groove itself to follow the spiral record-groove. In this respect, the mode of operation was the same, whether the spiral record-groove rotated about an advancing axis, as in Fig. 1, or about a stationary axis, as in Fig. 10. The two arrangements were recognized by Berliner as known equivalents for permitting the reproducing stylus to be vibrated and propelled by the revolving spiral record-groove, since they had been *shown, described* and *claimed* by Edison in 1878 as *equivalent* arrangements for such purpose (*supra*, pp. 48-53).

With regard to Fig. 10, Berliner says (T., p. 467, line 22);—

> "Fig. 10 is a sectional elevation of a *modified form* of my reproducing apparatus."

After describing his invention consisting of his improved process of recording and reproducing sound and his improved *disc* gramophone illustrated in Fig. 1, which, as stated in the patent, he used both for recording and reproducing, Berliner described the modified form, illustrated in Fig. 10, of his improved disc gramophone, as follows (T., p. 469, lines 90-123);—

> "Both the process and the *apparatus* thus far described *may be modified in various ways without departing from the main features of*

my invention. So, for instance, I can dispense with the centering device and *can rotate the record upon a stationary axis, if the diaphragm with its attached stylus is mounted in a manner to make it follow the spiral record. An arrangement of this character* is shown in Fig. 10. The reproducing-disk 54 is *in this case* mounted as hereinbefore described, but without regard to the centering device. The support 7′ may be fixed in position so that the bevel-gear 9, mounted upon the same in the manner described with reference to Fig. 3, will turn without progressive motion. Bevel-gear 9, and with it the reproducing-disk 54, are rotated by a bevel-gear 14′ upon a shaft 6′, to which power is applied by a weight, as shown, or in any other suitable manner. *The diaphragm-casing 31 is secured to a small truck 55 upon rails 56* arranged vertically above and parallel with a diameter of the reproducing-disk, and at such height above the same that the stylus 29 will be in engagement with the undulatory grooves of even depth which represent the record of sounds.

The listener applies his ear to the ear-piece, and when the shaft 6′ is rotated the stylus and diaphragm will be forced to vibrate, as in the apparatus shown in Fig. 1, but will at the same time move with the truck 55 across the face of disk 54."

In the Electrical World for November 12, 1887 (T., p. 244, top of second column) Berliner briefly described the apparatus of Fig. 10 as

> "the plan of mounting a reproducing diaphragm and stylus on *a carriage moving on rails*, and permitting the point of the stylus not only to vibrate, but also to push the carriage across the revolving disc, and *thereby* follow the volute of the sound record."

It has been shown under Point One (*supra*, pp. 48-53), that Edison in 1878 anticipated Berliner

and disclosed the broad, generic invention of mounting a sound reproducing stylus "*in a manner to make it follow the spiral record.*" It is true that Edison did not disclose a vibrating stylus pushing, across the revolving disc, a truck or carriage suspended by wheels moving upon a horizontal rod. Such a devise is impracticable and never went into use. But Edison *did* disclose the successful sound reproducing stylus so mounted that it was free to be vibrated and propelled by the spiral record-groove alone across the revolving disc or travelling belt. For this purpose Edison employed a stylus (1) carried by the free end of *a pivoted arm* as shown in Fig. 37; or (2) carried by the free end of *a sliding arm*, as shown in Fig. 34; or (3) carried by the free end of *an arm pivoted with a universal joint*, as shown in Figs 1, 2 and 11; or (4) carried at the free end of *an arm constantly fed by a feed-screw* to permit the stylus at all times to be vibrated and propelled by the revolving, spiral, record-groove, as shown in Figs. 6-10.

After Edison's disclosure of 1878 all such devices for permitting a sound reproducing stylus to follow a revolving, spiral, record groove and to be vibrated thereby were known equivalent devices of the art. The important point here is that, beyond all question, in Figs. 34 and 37, and as heretofore shown (*supra*, pp. 75-76) in Figs. 1, 2 and 11, Edison disclosed a sound reproducing stylus vibrated by a revolving record-groove and propelled across the groove or record-tablet solely by the pressure exerted by the record-groove itself upon the point of the stylus as it travelled in and along the spiral record-groove. This mode of operation Edison secured by mounting the stylus upon an arm that was free to move laterally, because of the manner

in which the arm was connected with its support.

It is an absurd proposition that claims 5 and 35 of the patent in suit can be construed to cover the broad, generic invention disclosed by Edison in 1878, and at the same time be held valid.

It will avail complainants nothing to contend that Judge Shipman, in *American Graphophone Co.* v. *Leeds*, 87 Fed. 873,877, held that it was not clear whether or not the Edison British patent No. 1644 of 1878 disclosed in Figs. 27, 34 and 37, *the gravity reproducer*, that is to say, a diaphragm and stylus, constituting a reproducer, of which the point of the stylus rested in and pressed upon the sound record-groove by gravity or the weight of the reproducer, as shown and claimed in the Bell & Tainter U. S. patent No. 341,214. A gravity reproducer mounted upon an arm connected to its support by a universal joint, and swinging vertically and horizontally was clearly disclosed by Edison in Figs. 1, 2 and 11 of his British patent of 1878 as well as by Bell & Tainter. We are not here concerned, however, with a gravity reproducer, except to point out that whatever else Berliner may have done, or may not have done, he did not invent, disclose or describe the gravity reproducer. By means of a gravity recorder or reproducer the *vertical adjustment* of the sound recording or sound reproducing stylus was obtained, as in Figs. 1, 2 and 11 of the Edison British patent of 1878, and in Fig. 13 of the Bell & Tainter patent No. 341,214, of May 4, 1886, which in claims 21 and 23 above quoted (p. 81) claimed a gravity reproducer secured by a *universal joint*.

Fig. 10 of Berliner's patent No. 564,586 (T., p. 465) disclosed a device in which a gravity reproducer was not and could not be employed, and in

which, therefore, no vertical adjustment of the sound reproducing stylus was possible. As hereinafter explained (*infra*, pp. 111-112), for this reason Berliner's device of Fig. 10 was impractical, never went into use and was discarded by Berliner himself after making only one such device (T., p. 239, Berliner's answers to Qs. 3-5). Even this one device Berliner lost (same reference).

It is respectfully submitted that the proposition cannot be controverted that Edison invented, described and claimed in 1878 the broad, generic invention of claims 5 and 35 of the patent in suit. So did Bell & Tainter in 1886. The proposition is an important one because under the well settled rule of patent law, supported by many decisions of this court, *in the field of improvement each patentee must stand on the specific improvement made and disclosed by him (Railway Co.* v. *Sayles*, 97 U. S., 544; *Cumming* v. *Baker*, 144 Fed. 395, 398, C. C. A. and cases cited; *Kokomo Co.* v. *Kitselman*, 189 U. S., 8, 24; *Cimiotti Co.* v. *American Co.*, 198 U. S., 399, 414; *Computing Scale Co.* v. *Automatic Scale Co.*, 204 U. S., 609; *American Graphophone Co.* v. *Walcutt*, 87 Fed. 556, 558.)

The principle was well stated by Judge Wheeler, following *Railway Co.* v. *Sayles, supra*, in *American Graphophone Co. v. Walcutt, supra.* In that case defendant was charged with infringing the claims of the Bell & Tainter patents for a record-tablet consisting of wax-like material on a paper backing. Judge Wheeler held that Edison, having disclosed, in 1878, the broad invention of a sound record-tablet,

> "The inventors (Bell & Tainter) could not have a valid patent for anything but their *improvement* upon Edison's tin-foil surface on a

> paper backing, *and if the defendant's structures are different improvements, he does not thereby infringe (Railway Co. v. Sayles,* 94 U. S., 554)."

Clearly, under the well settled law, *Berliner is limited to the device shown in Fig. 10* of patent No. 564,586, consisting of "a reproducing diaphragm and stylus on a carriage moving on rails," the carriage being suspended from the rail by wheels rolling on the rail.

Defendant's sound reproducing apparatus charged with infringement is the sound reproducing machine of the Suess United States and Canadian patents, a machine which Berliner in his lecture before the Franklin Institute said was the very "*ingenious*" work of Suess. Under no principle of patent law can the successful, commercial and "ingenious" machine devised by Suess, as an improvement upon the disclosures made by Edison in 1878, be held to come within the principle of the impractical, useless and discarded machine shown by Berliner in Fig. 10 of patent No. 564,586, because Berliner, like Suess, worked upon the basis of the disclosures made by Edison in 1878. Berliner was entitled to his improvement, if it was useful and patentable; but Suess was still more entitled to his improvement because Suess' improvement was successful and commercial.

In *Railway Co.* v. *Sayles*, 97 U. S., 554, this Court, as stated in head note 1, held as follows;—

> "1. A party who invents a new machine never used before, and procures letters-patent therefore, acquires a monopoly as against all merely formal variations thereof; *but if the advance toward the thing desired is gradual, and proceeds step by step, so that no one can*

claim the complete thing, each inventor is entitled only to his own specific form of device."

In *Central Co.* v. *Coughlin*, 141 Fed., 91, 94, 95, the Circuit Court of Appeals said;—

(p. 94) "*The first inventor of improvements cannot invoke the doctrine of equivalents and suppress all other improvements.* Walker on Patents (4th Ed.) §359, and cases cited. For stronger reasons, the first inventor of an improvement in a machine cannot prevent another from using the old machine without the improvements."

(p. 95) "*To carry the doctrine of equivalents to the length contended for* would make the granting of a combination patent for a machine confer on the patentee, not only the right to enjoin others from using *his* patent, but also the right to enjoin others from using *all old and well known machines*, in use at the time the patent was granted, intended to effect the same results produced by the new invention."

Berliner being a mere improver, and an impractical one at that, cannot enjoin others from using either the machines disclosed by Edison in 1878 or the improvement made by Suess in 1888. Berliner was not the inventor of a sound reproducing machine, having as one element of the combination composing it, a stylus free to be vibrated and propelled by the record. Berliner's rights, therefore, were limited to the device disclosed by him in Fig. 10 of U. S. Patent No. 564,586.

The device of Fig. 10 is *essentially different in its construction and mode of operation* from the Suess machine shown in Fig. 3 of the patent in suit (T., p. 454).

That the sound reproducing machine shown in Fig. 3 of the patent in suit was the invention of

Suess and not of Berliner is not open to question. Berliner himself has proved the point. Berliner testified that he prepared the article entitled "Berliner's Gramophone," published in the Electrical World for November 12, 1887 (T., p. 230, Q. 3; p. 243), in which the idea of mounting the reproducer "on a carriage moving on rails" was advanced (T., p. 244, top of second column) in accordance with the illustration of such device shown in Fig. 10. In his lecture before the Franklin Institute on May 16, 1888, Berliner, referring to Suess, said (T., p. 270);—

> "*He suggested to mount the sounder on a pivot at some distance from the disc and then let the reproducing groove guide the sounder across the disc over an arc of flat amplitude.* This happy idea is embodied in the *present* apparatus, and is a very *ingenious* adaptation indeed."

Suess' apparatus was used by Berliner to illustrate his lecture of May 16, 1888, and is shown in the cut entitled "Reproducing Apparatus, May, 1888" (T., p. 269). Berliner in his testimony described the Suess apparatus of the said cut as follows (T., p. 232, Q. 14);—

> "The reproducing diaphragm sound-box was mounted at the end of a pivoted lever, to it attached was a rubber tube which led to a horn mounted on the violin music stand. The stylus of the reproducing sound-box was placed into the outer circle of the spiral of the record, and upon turning table, upon which the record was mounted, the sound-box was propelled freely across the record-disc by and along the volute of the record."

Subsequently Suess improved the details of his reproducing apparatus of May, 1888, and there-

upon Berliner, *as the assignee of Suess,* on August 6, 1889, applied for and thereafter obtained U. S. patent No. 427,279 of May 6, 1890 (T., p. 446). A comparison of Fig. 1 of the Suess patent No. 427,279 with Fig. 3 of the patent in suit will show at once that Fig. 3 of the patent in suit illustrates, not Berliner's invention shown in Fig. 10 of patent No. 564,586, but Suess' sound reproducing apparatus of May, 1888 (T., p. 269), of Fig. 1 of Suess' U. S. patent No. 427,279 (T., p. 446), and of Fig. 1 (T., p. 446) of Suess' Canadian patent No. 41,901 (T., p. 155). A closer examination of Fig. 3 of the patent in suit will show that *Berliner merely incorporated in the Suess machine his improved reproducer,* consisting of the diaphragm and stylus shown in Figs. 6 and 7 of the patent in suit. In the Suess machines of May, 1888, and of the Suess United States (No. 427,279) and Canadian (No. 41,901) patents, a different stylus or reproducer is shown, the stylus and reproducer used to-day and used in defendant's machine. Defendant's machine is the Suess machine in all material respects and in no sense is defendant's machine the Berliner device of Fig. 10 of patent No. 564,586.

Subsequently, on May 5, 1891 (T., p. 169, fol. 507), Berliner, *as the assignee of Suess,* filed an application in Canada for a patent *broadly* covering the features of the Suess machine and thereafter, upon such application, obtained Canadian patent No. 41,901 of February 11, 1893 (T., p. 155). In his petition accompanying the application, *Berliner stated that Suess was the inventor and that he acquired the right to obtain the patent by assignment from Suess* (T., p. 170). As stated in the assignment, Berliner paid Suess $100 as the consideration thereof (T., p. 169). The descrip-

tion and drawings of the Suess Canadian patent are identical with the description and the drawings of the Suess U. S. patent, but although the Canadian patent contains each of the five claims of the United States patent, *the Canadian patent contains eight additional claims broadly covering the generic invention.* Claims 6, 8, 9, 4 and 10 of the Canadian patent correspond respectively to claims 1, 2, 3, 4 and 5 of the U. S. patent. In addition the Canadian patent contains the following eight *broad* claims (T., p. 165);—

> "1. In an apparatus for reproducing sounds from a rotating record tablet, *a reproducing stylus mounted on a swinging lever system* and having a *rectilinear* path over the record tablet, substantially as described." (See Fig. 3).
>
> "2. In an apparatus for reproducing sounds from a rotating record tablet having a record in the shape of a spiral groove, *a reproducing stylus and diaphragm mounted on a swinging lever system* and having a *radial* path over the record tablet, substantially as described." (See Fig. 1).
>
> "3. In an apparatus for reproducing sounds the combination of a disc having a record of sounds in the shape of an undulatory, spiral groove upon its surface and rotating about its center, with *a reproducing stylus guided by the record groove and mounted on a swinging lever system*, so as to have a *radial* path over the record tablet, substantially as described." (See Fig. 1).
>
> "7. In an apparatus for reproducing sounds from a record tablet, the combination with a reproducer mechanism consisting of a *sound conveyer*, and a diaphragm and stylus *mounted at one end thereof*, of a supporting frame for

the said reproducer, *loosely pivoted to swing freely both laterally and vertically*, substantially as described."

(NOTE: Claim 7 describes the specific form of the Suess machine which went into commercial use The "sound conveyer" is the horn and the advantageous feature of the combination was the mounting of the reproducer at the small end of the horn and also at the free end of the pivoted supporting arm or frame, as shown in Fig. 1, p. 446 and described at p. 158, fol. 472. Defendant's machine, described at p. 61, fol. 181, is this Suess machine).

"11. *In an apparatus for reproducing sounds from a rotating record-tablet, a reproducing stylus mounted to have a free movement over the surface of the record tablet*, substantially as described." (See Fig. 1).

"12. In an apparatus for reproducing sounds from a rotating record tablet, a reproducing stylus mounted on *a swinging lever system for carrying the stylus freely over the surface of the record tablet*, substantially as described." (See Fig. 1).

"13. In an apparatus for reproducing sounds from a rotating record tablet, a reproducing stylus mounted on *a lever system permitting universal movement of the stylus*, substantially as described." (See Fig. 1).

Clearly the apparatus of Fig. 3 of the patent in suit and defendant's machine are *not* the invention of Berliner. It is apparent, moreover, that Suess was a mere improver upon Edison. Referring to claim 1 of the Canadian patent Suess caused the reproducing stylus to travel in a *rectilinear* path instead of in the *radial* path mentioned in claim 2, by a system of links illustrated in Fig. 3 (T., p. 447). Edison had secured the

rectilinear path in 1878, as shown in Fig. 34 of his British patent (T., p. 486) by employing, for the mounting of the stylus, *an arm sliding on a rod* as the revolving, spiral, record-groove vibrated and propelled the stylus across the face of the record. Suess' system of links may, perhaps, have been new, but *the rectilinear path was old.* In Fig. 37, as well as in Figs. 1, 2 and 11, Edison showed the *radial* path. So it is with the various other features of the Suess machine. They all embodied the broader inventions of Edison, and of Bell & Tainter. Suess was an improver like Berliner, but his improvements have nothing in common with Berliner's device of Fig. 10 of patent No. 564,586, except those features of the prior art which were public property and which neither he nor Berliner could appropriate.

Berliner and Suess both attempted to improve upon Edison's broad invention, upon which Bell & Tainter had already made important improvements, but *the devices made by Berliner and by Suess were radically different.* Berliner cannot, therefore, claim that the Suess device comes within the scope of the principle of his device shown in Fig. 10 of patent No. 564,586. Moreover, Berliner's device of Fig. 10 was impractical, never went into use and was discarded. No such device was ever sold and Berliner himself made only one, which he lost (T., p. 239, Q. 5). The Suess machine went into immediate use for Berliner used it to illustrate his lecture of May 16, 1888. It is the Suess machine which complainants use to-day. It is the Suess machine which the defendant bought and sold and which complainants charge as an infringement (T., p. 60, fols. 180-182). The Suess machine, moreover, is the Edison machine of 1878 and the

Bell & Tainter machine of 1885, the only material difference and advantage of the Suess machine being the manner in which Suess combined the large horn or sound conveyer with the reproducer. As stated in the above quoted seventh claim of the Canadian patent, Suess mounted the diaphragm and stylus, constituting the reproducer, at the free or swinging end of the horn and of the supporting arm. This was copied by Berliner, with the other features of the Suess machine, in Fig. 3 of the patent in suit (T., p. 454), and is the construction employed in defendant's machine (T., p. 61, fol. 181).

Suess described the mode of operation of his apparatus in the Canadian, as well as in the United States, patent as follows (T., p. 158, fol. 474);—

> "The stylus engaging with its point the record groove, is controlled by the walls of the latter, and as will be hereinafter more fully shown, *I rely upon this control of the stylus by the walls of the record groove for the movement of the stylus across the face of the disc*, there being no positive feeding mechanism for thus moving the stylus."

This mode of operation Berliner claimed broadly as the invention of Suess. For example, claim 11 of the Canadian patent (T., p. 167) reads as follows;—

> "11. In an apparatus for reproducing sounds from *a rotating record tablet, a reproducing stylus mounted to have a free movement over the surface of the record tablet*, substantially as described."

In view of the foregoing statements and claims of the Canadian patent, it can avail complainants nothing to argue, as they did without success in the Courts below, that Suess in U. S. patent No. 427,-

279 (T., p. 448, lines 8-14) and in the Canadian patent (T., p. 157, fol. 471) stated that his sound-reproducing apparatus was an improvement upon the gramophone of the expired Berliner patents No. 372,786 of Nov. 8, 1887 (T., p. 416) and No. 382,790 of May 15, 1888 (T., p. 436), since those expired patents contain no suggestion of the subject matter here in controversy. The statement made by Suess (T. p. 449, line 32) that

> "The construction of the *stylus* and the mounting therefor form no part of the present invention, *and are therefore not specifically described*."

refers, obviously, to the stylus and the manner of attaching the stylus to the diaphragm, which had been described in the prior art, as for instance in Fig. 2 of Berliner's expired U. S. patent No. 372,786 of Nov. 8, 1887 (T., p. 416) or Fig. 2 of the expired British patent No. 15,232 of Nov. 8, 1887 (T., p. 526). The subject matter here in controversy was fully and specifically described by Suess in both the United States and Canadian patents and was broadly claimed by him as his invention in the Canadian patent. In such claims Berliner acquiesced, for he secured the Canadian patent as the assignee of Suess.

An inspection of Fig. 10 of patent No. 564,586 shows at once that Berliner's apparatus of Fig. 10 is impractical. It was because it was impractical that Berliner abandoned it. Defendant's experts have conclusively shown that the apparatus of Fig. 10 is impractical (T., Ensign, pp. 106-111, fols. 318-332; Leeds, pp. 119-121, fols. 357-362; Moeller, p. 122, fols. 365-367; Irish, p. 288, fol. 862).

Among the many reasons given by defendants' experts showing that the apparatus of Fig. 10 of

patent No. 564,586 is impractical, the following may be mentioned; *the lack of vertical adjustment* would either prevent the stylus from reaching down into the record-groove or the bottom of the record-groove on rising would force the stylus up and the truck, 55, would be lifted from the rail, 56, and fall; the revolving disc always rises and falls, the rise or fall increasing toward the circumference, and, because of the lack of vertical adjustment, the stylus would leave the record groove when the disc falls and would be struck by the bottom of the record-groove when the disc rises, throwing the truck off the rail; record-grooves are of different depths and record tablets are of different thicknesses and often warp and buckle, by reason of which, and because of the lack of vertical adjustment, either the stylus would not reach into the record-groove or would be pushed up by the bottom of the record groove; the weight of a tube, 33, or of a horn would throw the stylus, 29, out of the record groove; the lateral movements of the stylus would cause the truck, 55, to move laterally and the diaphragm would not vibrate and the sound would not be reproduced; the revolving disc would cause a swaying of the truck and suspended sound-box and the stylus would be forced out of adjustment with the record-groove; for these and other reasons enumerated by defendants' experts, the arrangement shown in Fig. 10 is a mere laboratory experiment and not a practical or operative device. It never went into use. Berliner made only one; which he lost.

In *Westinghouse* v. *Boyden Co.*, 177 U. S., 534, 572, this court held that the *successful* Boyden device should not be construed to be an infringement of the *unsuccessful* Westinghouse patent, saying;—

"We are induced to look with more favor

> upon this (Boyden) device, not only because it is a novel one and a manifest departure from the principle of the Westinghouse patent, but because it solved at once in the simplest manner the problem of quick action, whereas the Westinghouse patent did not prove to be a success until certain additional members had been incorporated into it."

Berliner's device of Fig. 10 *never* proved to be a success. Berliner clearly did not take "the last successful step" (*Cimiotti Co. v. Fur Co.*, 198 U. S., 399; *Kokomo Co. v. Kitselman*, 189 U. S., 8; *Dey Co. v. Syracuse Co.*, 161 Fed., 111).

In *Killeen* v. *Buffalo Furnace Co.*, 140 Fed. 33, 36, Judge Hazel said;—

> "The Killeen patent was not anticipated. The patent to Hartman, dated June 27, 1893, No. 500,386, upon which reliance is placed by defendant *has never been put into practical use*. According to the expert witness for complainant, *the Hartman apparatus is wholly impracticable*."

POINT SIX.

Berliner patent in suit No. 534,543, of February 19, 1895, was granted for an invention previously patented by Berliner in Germany, by Berliner German patent No. 53,622, of November 20, 1889. The term of the patent in suit, therefore, expired with the expiration of the term of the prior German patent on Nov. 7, 1902, before this suit was begun. Section 4887 of the Revised Statutes considered and the authorities collated.

(Assignment of errors, 1, 2 and 3, supra, p. 12).

In the consideration of this important point we have to do not with "minor details," as stated by the courts below, but with an INVENTION covering one of the *most important* parts of the *gramophone*, namely, the REPRODUCER, for which Berliner secured this prior German patent. The error of the courts below, with reference to the relative importance of the different features of improvement of the patent in suit, has been pointed out in the Statement of this brief, where it was shown that, in his lecture before the Franklin Institute, Berliner stated that the *reproducer* and the *recorder*, which he said were constructed on precisely the same principles, constituted the *two most important features of the gramophone* (*supra*, pp. 35-36); and that, in pointing out the principal features of improvement of the patent in suit, Berliner specifically stated that of the *three* principal features of his invention, the *reproducer* formed *one*, and that the second and third consisted of the *recorder* and the *improvement in recording* wherein alcohol was

continuously applied to the recordng medium (*supra*, pp. 31-33).

The German Patent Office, notwithstanding its well-known stringent requirements upon the question of invention, granted this prior German patent to Berliner for the *invention* embodied in the *reproducer*. Letters-patent of Germany are, according to the German patent law (T., p. 179, fol. 536), granted for *inventions only*, and not for insignificant or minor details. Having obtained this prior German *patent* for the important invention embodied in that most important part of the gramophone, namely, the reproducer, Berliner thereafter applied for and obtained the patent in suit, claiming and patenting therein the *invention*, embodied in the reproducer, which he had previously patented in Germany. Under the well settled law, the patent in suit, therefore, expired with the expiration of the prior German patent.

(a) German patent No. 53,622.

A certified copy of the patent forms one of defendant's exhibits (stipulation, T., p. 542). A copy of the drawings and a translation of the specification of the patent are to be found in the record (T., pp. 150-154).

That the *invention* described and covered by the German patent is an *invention* described and covered by the patent in suit and for which the patent in suit was granted, appears upon the face of the patent and is shown by defendant's witnesses (Hicks, T., pp. 82-86, fols. 245-256; Ensign, T., pp. 99-101, fols. 297-303; Leeds, T., pp. 116-118, fols. 348-352).

(b). German patent No. 53,622, being a patent for an "invention" constituting an im-

provement, expired on Nov. 7, 1902, according to the German law, with the patent for the invention upon which the improvement was made.

A copy of the material parts of the German Patent Law is included in defendant's exhibits (T., p. 179).

According to the German law, the duration of a patent is fifteen years, but "if an invention is an improvement upon another invention patented in favor of the applicant," a patent of addition only can be obtained, which terminates with the patent for the original invention (T., p. 179, fols. 537-538). It appears upon the face of German patent No. 53622, that it is a second patent of addition to patent No. 45,048, of November 8, 1887, which also forms one of defendants' exhibits together with a translation thereof (T., p. 132). Patent No. 53,-622, therefore, expired November 7, 1902 with patent No. 45,048. That the term of patent No. 53622 was limited to expire on November 7, 1902, is stated on the face of the patent. The certificate of the German Patent Office also states that patent No. 53622 had been cancelled in the rolls (T., p. 151, fol. 451).

(c). The description and claims of the patent in suit for the "'invention" previously patented by the German patent.

What then is the *invention* described and claimed in German patent No. 53,622 and also in the patent in suit No. 534,543? It is that *important* part of the gramophone, known as the *reproducer*. A comparison of figures 6 and 7 of the patent in suit (T., p. 455) with figures 1 and 2 of the German patent

(T., p. 154) shows that the reproducer patented in the patent in suit is identical with the reproducer patented in the German patent.

As shown in the opening statement of this brief (*supra*, pp. 31-36), *Berliner specifically stated that the recorder*, illustrated in Figs. 4 and 5 (T., p. 455), *and the reproducer*, illustrated in Figs. 6 and 7 (T., p. 455), *constituted most important features of the invention forming the improvement described and claimed in the patent in suit.*

The reproducer of the patent in suit, illustrated in figures 6 and 7 thereof, is described at page 460, lines 34-102. The reproducer consists of the diaphragm, lever and *reproducing* stylus carried by the free end of the lever. The diaphragm 92 is mounted in a casing 91. A leaf spring 101 forms the lever and carries the stylus 112. The leaf spring is bent or twisted at right angles at 102, *so that the face of one part of the leaf spring is perpendicular to the face of the other part of the leaf spring.* The leaf spring faces with its flat side the face of the diaphragm up to a point beyond the center of the diaphragm, and is secured at one end to the diaphragm casing. The other end of the leaf spring crosses the diaphragm casing at a point opposite to the point at which the flat end is fixed, and is, as above stated, perpendicular to the face of its flat part which is fixed to the diaphragm casing. As stated in the patent in suit (p. 460, lines 53-54), "*the spring is therefore elastic in two directions at right angles to each other.*" At the point where the leaf spring passes over the center of the diaphragm, it is, by means of a screw pin 106, connected with the center of the diaphragm, and nuts are provided whereby the *tension* between the diaphragm and the leaf

spring can be regulated (p. 460, lines 61-71). The end of the leaf spring which crosses the diaphragm casing is not secured thereto, but is *free to vibrate* and it is called the free end, 103, of the spring. To the free end of the spring a binding post 111 is secured in which the reproducing stylus 112 having a *wedge-shaped point* is held by a set screw 113 (p. 460, lines 72-76). In order to reduce the volume of the emitted sound or to render it more clear, one or more perforated diaphragms 114, may be placed in the neck 90 leading from the the diaphragm casing (p. 460, lines 90-102). In order to dampen the individual vibrations of the leaf spring, soft rubber cushions, 104, may be placed upon the leaf spring (p. 460, lines 60-61). *The tendency of the leaf spring 101 is to press toward the diaphragm* and the edge of the part 103 which crosses the diaphragm casing bears against the diaphragm casing 99 and also against the block 100 (p. 460, lines 47-54.)

Such are the features of the reproducer of the patent in suit and these features are covered in claims 24-34. The features of the reproducer, consisting of the diaphragm and *laterally* vibrating stylus, are also covered by claims 5 and 35 which are limited by, and depend for their *novelty* upon, a stylus "vibrating" and "free to be vibrated," *substantially as described*, and having a "*wedge-shaped point*," that is a point so "*shaped for engagement with said record.*"

Claims 24-34 summarize the important features of the reproducer and are as follows:

> "24. In a gramophone a sound reproducing diaphragm in combination with *a stylus lever extending diametrically across the same, and*

elastic in two directions at right angles to each other, substantially as described.

25. In a gramophone, the combination of a diaphragm and a stylus carrier composed of *a leaf spring twisted at one point so as to bring the edge of the one portion at right angles to the face of the other portion, whereby it is elastic in two directions*, substantially as described.

26. In a gramophone the combination of a reproducing diaphragm and stylus; with a stylus carrier composed of a leaf spring *extending flatwise over the face of the diaphragm and edgewise over the edge of the diaphragm*, substantially as described.

27. In a gramophone the combination of a reproducing diaphragm mounted in a suitable frame the latter being provided at one point with a boss or stop; with a double elastic stylus carrier composed of *a twisted leaf spring tending toward the diaphragm* and against the boss or stop, substantially as described.

28. In a gramophone, a reproducing diaphragm and stylus in combination with an elastic stylus carrier extending over the face of the diaphragm and tending toward the same, of an adjustable connection between the diaphragm and stylus carrier and *adjustable for varying the pressure between diaphragm and style carrier*, substantially as described.

29. In a gramophone the combination of a reproducing diaphragm mounted in a suitable frame provided with a boss or stop; with a double elastic stylus carrier tending toward the diaphragm and toward the stop and elastic non-resonant dampers interposed between the style carrier and the frame and stop, substantially as described.

30. In a gramophone a sound reproducing diaphragm and a sound conveying tube for the

same, with one or more non-resonant perforated diaphragms in the said tube for reducing the volume of sound conveyed to the ear, substantially as described.

31. In a gramophone a recording stylus pivoted to move in response to the vibrations of a diaphragm and *elastic in a plane at right angles to such motions*, substantially as described.

(Since a recording stylus may also be a reproducing stylus, claim 31 can be read upon the reproducer shown in Figs. 6 and 7.)

32. In a gramophone, *a reproducing stylus having a wedge-shaped point engaging the walls of the record groove*, substantially as described.

33. In a gramophone reproducer, a stylus carried or formed by a spring fixed at one end to the diaphragm holder and freely extending across and beyond the same and *operatively connected with the center of the diaphragm*, substantially as described.

34. In a gramophone reproducer, a spring constituting or carrying a stylus, fixed at one end to the diaphragm holder and extending across and beyond the periphery of the same and freely pressing against the diaphragm, substantially as described."

Claims 5 and 35 read as follows:

"5. The method of reproducing sounds from a record of the same which consists in *vibrating* a stylus and propelling the same along the record by and in accordance with the said record, *substantially as described.*

35. In a sound reproducing apparatus consisting of a traveling tablet having a sound record formed thereon and a reproducing *stylus shaped for engagement with said record*

and *free to be vibrated* and propelled by the same, *substantially as described.*"

Obviously, a reproducer consisting of a diaphragm and stylus mounted thereon in the manner described has for its object the *lateral* vibrations of the stylus carried by the free end of the leaf spring.

Judge Hazel, in the prior suit, said (T., p. 67);—

> "Complainants contend, and the proofs show, that the stylus attached to the diaphragm is arranged so as *to permit* the same *to vibrate laterally* and that owing to lateral undulations in the walls of the record groove, a desirable swaying motion is imparted to the reproducer diaphragm."

Mr. Middleton, complainants' expert, in describing the operation of complainants' machine, says (T., p. 51, fol. 153);—

> "The stylus of the sound-box *engages the record groove* of complainants' sound record and when the latter is rotated with the turntable, the stylus is *laterally vibrated* to set up vibrations in the sound-box diaphragm."

Mr. Kennedy, complainants' expert, in describing the invention of the patent in suit, says (T., p. 57, fol. 169);—

> "The sound-box contains a diaphragm which is set in vibration by a stylus suitably connected therewith, which stylus *enters the record* groove and is *laterally vibrated* thereby. These lateral vibrations being reproduced in the diaphragm," etc.

Indeed, a stylus carried by a leaf spring so constructed and so mounted could vibrate in no other manner than laterally, and, as the specification

states (p. 460, lines 27-29), the stylus and diaphragm vibrate "in accordance with the undulations of the record groove," which undulations are lateral and not vertical. The *"vibrating"* stylus of claim 5, and the reproducing stylus *"free to be vibrated"* of claim 35, each *"substantially as described"* is, of course, the laterally vibrating stylus of the reproducer claimed in claims 24-34, the stylus being, by means of the *bent leaf spring*, so mounted that it is *"free to be vibrated"* laterally. Furthermore, the *"stylus shaped for engagement with said record"* of claim 35, is the *"reproducing stylus having a wedge-shaped point engaging the walls of the record groove"* of claim 32.

The reproducer, shown in Figs. 6 and 7 and *patented* in claims 24-34, is the reproducer of the sound reproducing apparatus shown in Fig. 3 and *patented* in claims 5 and 35.

(d). The "invention" described and claimed in the prior German patent. Judge Townsend found that the invention described and claimed in the German patent is described and claimed in the patent in suit.

Referring now to the specification and drawings of German patent No. 53,622 (T., p. 150), there is the same diaphragm casing *cc'*, which holds between its parts the same diaphragm *b*. There is the same lever or leaf spring *aa'*, consisting of two parts, one the flat part fastened to the diaphragm casing at *g*, and the other twisted *so that its face is perpendicular to the face of the flat part and it is free to vibrate laterally*. The free end of the leaf spring carries the stylus *k*, *having a wedge-shaped point, shaped for engagement with the record*. The stylus *k* is secured to the leaf spring in the same man-

ner by means of a block *h*, made fast to the leaf spring, and a set screw *i*. Just as in the United States patent, the leaf spring is connected with the diaphragm by means of a pin *m*, and nuts and screws, *n*, *f* and *e*, serve to regulate the *tension* between the leaf spring and the diaphragm, just as the *tension* between the leaf spring and the diaphragm is regulated in the United States patent. In order to obtain a dampening of the leaf spring, the free end of the leaf spring is surrounded by a ring of rubber, *s*, just as in the United States patent. The tube *d* leads from the diaphragm casing but is cut off so that the perforated tube, shown in the corresponding French patent next to be considered and in the United States patent, does not appear. Without question, *the invention shown in the German patent is shown in the United States patent*, and *that invention is covered by both patents*. Within the language and meaning of §4887 of the Revised Statutes the United States patent *was "granted for an invention which has been previously patented"* in Germany and "shall be so limited as to expire at the same time with the foreign patent." The claim of the German patent reads as follows (T., p. 153);—

> "The replacing of the two armed lever (*s*) protected by claim 2b of the chief patent No. 45048, and of the recording stylus (29) protected by claim 4b of the same, by a spring (*aa'*) carrying the stylus for the reproduction of the sound, which with the one end is made fast to the casing (*cc'*) enclosing the diaphragm, *while the other end of the same can vibrate freely*, so that the vibrations communicated to the latter are carried over by means of the pin (*m*) connecting the spring and the diaphragm at right angles to the surface of the diaphragm."

The two-armed lever (*s*) protected by claim 2b of the chief patent No. 45048 (T., p. 143), and the recording stylus 29 protected by claim 4b of the same (T., p. 144), are shown in figures 2 and 9 of German patent No. 45048 (T., pp. 526,527). The drawings of German patent No. 45048 are identical with the drawings of English patent 15,232 of 1887 (T., pp. 526-527), and by stipulation (T., p. 540) have not been reproduced.

Judge Townsend found (T., p. 320);—

> "The drawings of the German patent are substantially identical with Figures 6 and 7 of the patent in suit *and the specifications describe and the claims cover these constructions.*"

> (*c*). *Futile effort of complainants' counsel to find some slight difference between the description and drawings of German patent No. 53,622 and of French patent No. 207,090 and the description and drawings of the patent in suit.*

Complainants' counsel in the Courts below, realizing the strength of the defences set forth under this and the following point of this brief, laboriously endeavored to find some slight distinction between the description and drawings of Berliner's third German and French patents (see Point Seven for French patent) and the description and drawings of the patent in suit. Complainants' counsel admitted that the imaginary differences in operation claimed by him are nowhere stated to exist in the patent in suit. It is unnecessary to deal with these hair-breadth distinctions which complainants' counsel endeavored to draw. *Concededly and obviously the numerous claims of the patent in suit, claims 24-34 above quoted* (*supra*, pp. 118-120),

would be infringed by the reproducers and recorder described and patented in the prior German and French patents. Hence the patent in suit was granted for an invention previously patented in the German and French patents, according to all the authorities, and whether there are differences or not is immaterial, as Judge Severens expressly stated in *Western Electric Co. v. Citizens' Tel. Co.*, 106 Fed. 215, 219, where he "conceded that there are differences in some details between the foreign and the home patents upon which independent claims might be based." But he added;—

> "If the home patent CANNOT EXPIRE IN PARCELS, and the Italian patent, for instance, covered the matter of the *first claim* of the patent in suit, it necessarily follows that the home patent expired with the Italian patent three years after the issue of the latter, and from this it necessarily results that the complainant must fail, and that the bill should be dismissed."

To the same effect is *Thomson-Houston Co. v. McLean*, 153 Fed. 883 (C. C. A.), where the *differences* existing between claim 12 of the home patent and claim 2 of the prior British patent did not constitute a *patentable* invention and where the plea of expiration was, therefore, sustained on the authority of *Siemens' Adm'r v. Sellers*, 123 U. S. 276.

In the German and French patents, as well as in the United States patent, there is a positive connection between the spring and the diaphragm. Claim 28 (*supra*, p. 119), of the patent in suit shows that "an adjustable *connection between the diaphragm and stylus carrier* and *adjustable* for varying the *pressure* between diaphragm and style

carrier" were particularly pointed out as elements of the reproducing diaphragm and stylus. Claim 33 (*supra*, p. 120), also covers the connection between spring and diaphragm. The same, of course, is true of the recorder of the patent in suit. Various parts of the specification might be referred to, but it seems unnecessary. As above shown constant *tension* exists between the spring and diaphragm in the United States and German patents, and means are shown in each patent for regulating the tension. The same is true of the French patent. Whatever vibrations the diaphragm does have, in reproducing the record, are due to the positive pressure of the stylus in one direction and the removal or reduction of the pressure of the stylus in the other direction, in which latter case the *tension* of the diaphragm comes into play to straighten the diaphragm and thus produce a vibration, as it were, toward the stylus. This clearly is the mode of operation in all the patents, notwithstanding any possible differences in the use or placing of a particular nut or screw.

Complainants' counsel did not intimate, even in the vaguest manner, and could not truthfully say that the imaginary differences, which he claimed to exist and upon which he argued, affect in the slightest degree the proposition that the numerous claims of the patent in suit, claims 24-34 above quoted (*supra*, pp. 118-120), would be infringed by the structures described and *patented* in the prior German and French patents.

Of course, the acoustic springs of the French and German patents, as well as of the patent in suit, have a tendency to press toward the diaphragm. The figures of the patents all show this. The French patent claims it (claim 7, T., p. 129). The

description of the French patent expressly states that the extremity of the acoustic spring presses against the casing of the sound-box (T., p. 127, fol. 381) and claim 34 of the patent in suit would be infringed by this. The perforated diaphragm 114 in the tube 90 of the patent in suit (Fig. 7, T., p. 455) is the perforated diaphragm D of Fig. 3 of the French patent (T., p. 131). Hence claim 30 (*supra*, p. 119) of the patent in suit would be infringed by the reproducer of the French patent; but it is useless to pursue this question further. That numerous other claims of the patent in suit would be infringed by the reproducers and recorder of the German and French patents is clear.

> *(f). The provision of § 4887 of the Revised Statutes, fixing the single term of a home "patent granted for an invention" previously patented in a foreign country, is clear and unambiguous and must control the decision in this suit without change by judicial action "based upon some supposed policy of Congress." The Courts below erred in refusing to follow the unambiguous provision of the Statute, and in holding, contrary to the Statute and the decision of this Court, that a patent can have a plurality of terms and can expire in parcels.*

The point under consideration is that the "*invention*" described and covered by prior German patent No. 53,622 is an invention covered by the patent in suit No. 534,543 and for which the patent in suit was granted. What then is the law applicable to this state of facts?

At the time the patent in suit was issued, February 19, 1895, section 4887 of the Revised Statutes

was in force, governs the patent (155 Fed. 842, 849), and read as follows:

> "Sec. 4887. No person shall be debarred from receiving a patent for his invention or discovery, nor shall any patent be declared invalid, by reason of its having been first patented or caused to be patented in a foreign country, unless the same has been introduced into public use in the United States for more than two years prior to the application. But *every patent* granted for *an invention which has been previously patented in a foreign country shall be so limited* as to expire at the same time with the foreign patent, or, if there be *more than one*, at the same time with *the one having the shortest term*, and in no case shall it be in force more than seventeen years."

The German patent was previously patented (*Bate Refrig. Co.* v. *Sulzburger*, 157 U. S., 1).

The following provision of the Statute fixes the *term* of the United States *patent;*

> "But *every patent* granted for an invention which has been previously patented in a foreign country *shall be so limited* as to expire at the same time with the foreign patent."

It is the *patent*, and not the separate *claims* thereof, which shall be so limited to expire. If there is *an invention* patented in a foreign country, and if that invention is described and claimed in a subsequent United States patent to the same inventor, the *term* of the United States *patent*

> "shall be so limited as to expire at the same time with the foreign patent, or, if there be *more than one*, at the same time with the one having the *shortest term*."

As stated by Judge Coxe in *Société v. Electric Co.* (97 Fed. 604, 605);—

> "Section 4887, Rev. St. U. S., has reference only to *inventions previously patented in a foreign country.*"

The *definition* and *designation*, contained in the statute, of the *invention* which must appear in the United States patent and in the prior foreign patent, in order that the former shall be limited to expire with the latter, is an invention, "*which has been previously patented in a foreign country.*" This is the sole and exclusive definition and designation. The court cannot change the definition and designation. The test, therefore, is solely, whether the United States patent claims the "invention which has been previously patented in a foreign country." If so, the statute *applies* and the United States *patent* expires with the foreign patent.

This provision of the Statute fixes the *term* of the United States *patent* as a whole. To fix the *term* of the *patent* is the sole purpose of the provision (*Sawyer Spindle Co. v. Carpenter*, 143 Fed. 976, 979). It does not assign to the several *claims* of the patent *different* terms. It assigns to the patent as a whole a *single term* and the *patent* or *the term* of the patent must be so limited as to expire at the same time with the foreign patent. The Statute applies *whenever* a United States patent claims the invention which has been previously patented in a foreign country. When the Statute once applies, the *term* of the United States patent is limited by the *term* of the prior foreign patent and must expire therewith. No *exception* is made in favor of a United States patent which may contain *additional* claims which would not

be supported by the specification of the foreign patent. No matter what else the United States patent may contain, if it *does* contain, and if it *is* granted for, *an invention previously patented in a foreign country*, the *term* of the United States patent *as a whole* must expire with the *term*, and the *shortest term*, of the prior foreign patents. The *single term* of the prior foreign patent measures the *single term* of the home patent. This clearly is what the Supreme Court held in *Siemens' Adm'r. v. Selers*, 123 U. S. 276, when it said that a patent "*cannot be construed as running partly from one date and partly from another. This would be productive of endless confusion*"; and this clearly is the plain provision of the Statute. Under such circumstances, the question whether one claim of a patent embodies a basic invention or is more important than another claim of the same patent need not be determined since the answer to such a question, if, *indeed, it can be answered*, is *not the test prescribed by the Statute*. Such a test would involve the greatest doubt, *confusion* and uncertainty. There is no provision in the statute limiting the *extent* of the expiration of a patent granted for an invention previously patented in a foreign country. There is no provision in the Statute giving to a patent "*granted for an invention which has been previously patented in a foreign country*" one term for claims covering *that* invention and *another term* for other claims which may be contained in the patent. *According to the Statute*, the United States *patent* is to have a *single* term if it is granted for *an* invention previously patented in a foreign country, *no matter what else the United States patent may be granted for*. The

rule of the Statute is clear and positive. No exception is stated. The rule applies to "*every* patent." When, therefore, the Courts below in the suit at bar held that the patent in suit could have *a plurality of terms*, and that claims 5 and 35 of the patent in suit could survive the expiration of prior foreign patents granted, concededly, for *an invention* claimed by the United States patent in suit, the Courts below clearly erred on the question of law.

Suppose several prior foreign patents granted in the *same* country for *different features* of the invention covered by the home patent. In such case, the home patent must expire "*with the one having the shortest term.*" The Patent Office so held even before the decision by this Court in *Siemens' Adm'r v. Sellers*, saying (*ex parte Unsworth*, 15 O. G. 882);—

> "Where the entire matter" (of the home patent) "is the subject of more than one foreign patent" (in the same country) "the restriction should be made in view of the one having the shortest term."

Concededly in the suit at bar, the matter of the patent in suit was the subject of *more than one* prior foreign patent. As shown in this and the following point, the reproducer and the recorder of the patent in suit were previously patented in Germany and France. As shown under Point Nine (*infra*, p. 188), both the Circuit Court and the Circuit Court of Appeals held that the alleged invention of claims 5 and 35 in suit was previously patented in Canada. Hence, under the statute, as applied by the Patent Office in *ex parte Unsworth*, *supra*, the patent in suit was limited to expire with the prior foreign patent having *the shortest term.*

If the German patent had the shortest term, then the home *patent* expired therewith. It cannot be held, under the statute and the decision in the *Siemens'* case, that *some* claims expired with the German patent, *some* with the French patent, and *some* with the Canadian patent.

In *Bate Refrig. Co.* v. *Sulzberger*, 157 U. S., 1, 36, the Supreme Court, referring to the language of §4887 of the Revised Statutes, said, as summarized in 4 Fed. Rep. Digest 9048;—

> "Where the language of a statute is *plain* and *unambiguous*, it is the *duty* of the court to enforce it according to the *obvious meaning* of the words, *without attempting to change it* by adopting a different construction, based upon some *supposed policy* of congress in regard to the subject of legislation, or upon considerations of *injustice* or *inconvenience* arising from the enforcement of the statute according to its terms."

Hard cases make bad law and are the quicksands of the law (*Doepfner v. Bowers*, 55 Misc., 562 (N. Y.).

There can, however, be no injustice in enforcing the Statute in cases such as the suit at bar. Berliner *voluntarily* included claims 5 and 35 of the patent with other claims for *inventions which to his knowledge he had previously patented in foreign countries*. He, therefore, *voluntarily* subjected the claims in suit to the operation of the Statute and no strained or forced interpretation or construction of the Statute or of claims 5 and 35 should be resorted to in order to protect him against his voluntary act.

In support of its holding that where the language of a statute is plain and unambiguous, "a

refusal to recognize its natural, obvious meaning would be justly regarded as indicating a purpose to change the law by judicial action based upon some supposed policy of Congress," this Court in *Bate Refrig. Co.* v. *Sulzberger*, cited and quoted at p. 37 (157 U. S.), its prior decisions in the two following cases;—

Hadden v. *Collector*, 5 Wall, 107, 111, where this Court said;—

> "What is termed the policy of the government with reference to any particular legislation is generally *a very uncertain thing*, upon which *all sorts of opinions*, each variant from the other, may be formed by different persons. It is a ground much too unstable upon which to rest the judgment of the court in the interpretation of statutes."

Scott v. *Reid*, 10 Pet., 524, 527, where this Court said;—

> "Where the language of the act is explicit, there is great danger in *departing from the words used*, to give an effect to the law which may be *supposed* to have been designed by the legislature. *It is not for the court* to say where the language of the statute is clear, that it shall be so construed as to embrace cases because no good reason can be assigned why they were excluded from its provisions."

As stated by the New York Court of Appeals (*Tompkins* v. *Hunter*, 149 N. Y., 117, 123), if the words of a statute have a definite meaning,

> "there is no room for construction and *courts have no right to add to or take away from that meaning.*"

In *Karst* v. *Gane*, 136 N. Y., 316, 321, the same court said;—

> "in recent times courts are less disposed than

> formerly to depart from or qualify the plain words of a statute in favor of what is termed *an equitable construction*, in order to take *particular cases* out of its operation *upon some supposed view of policy not indicated in the act itself.*"

To the same effect is *People* v. *Woodruff*, 132 N. Y., 355, 364.

In *South Bay Co.* v. *Howey*, 190 N. Y., 240, 247, the same court said;—

> "It is not an answer to the position of the defendant to say that his defense is technical because if the plaintiff comes within the provisions of the statutes quoted the defense is interposed in accordance with *the express policy of this state.*"

By what authority, then, did Judge Townsend read into the statute the *exception* that it "does not apply to cases where the foreign patents which have expired do not cover the *broad* claims for the *basic* invention?" There is contained in the statute no such exception. The clear and imperative rule is that the United States patent shall expire with a prior foreign patent if the "*invention*" protected by the prior *foreign* patent is "*an invention*" for which the United States patent was granted.

The proper rule for the interpretation of a statute, such as the Canadian Patent Act, hereinafter referred to under Point Nine, was stated, in perfect agreement with the rule stated by this Court in *Bate Refrig. Co.* v. *Sulzberger*, *supra*, by the House of Lords in England in *Dominion Cotton Mills Co.* v. *General Engineering Co.*, L. R. App. Cas. (1902), p. 570. In that case it was said (p. 573);—

> "The whole question, therefore, turns on the meaning and legal effect of the words 'under

any circumstances, *if a foreign patent exists*, the Canadian patent shall expire at the earliest date on which any foreign patent for the same invention expires.' "

The Canadian Exchequer Court held, in the first instance, that the words "if a foreign patent exists" referred to the date of the *grant* of the Canadian patent. The Canadian Supreme Court reversed the Exchequer Court and held that the words referred to the date of the *application* for the patent. Thus both Courts attempted, by judicial legislation, to read into the statute something which was not there. The House of Lords held that the words meant *just what they said* and that according to the statute a Canadian patent must expire with a foreign patent existing *at any time* during the continuance of the Canadian patent. The House of Lords said (p. 573);—

"The language is *clear* and *imperative*. Their Lordships can only understand it as declaring that under all circumstances as soon as any foreign patent for the same invention expires the Canadian patent, if then existing, shall expire also; they can *find* no limit as to time except that the foreign patent must both exist and expire after the Canadian patent has been granted and before it has ceased from any other cause."

(*g*). *The principle of the decisions of the Supreme Court in Siemens' Adm'r. v. Sellers, 123 U. S. 276, and of the lower Courts following that decision, is that "a patent cannot expire in parcels," "cannot be construed as running partly from one date and partly from another. This would be productive of endless confusion." Such principle is derived from,*

and is the only principle which can be derived from, the provision of §4887 of the Revised Statutes fixing the term of the patent.

In the leading case of *Siemens' Adm'r* v. *Sellers*, 123 U. S. 276, the question was whether a United States patent which had *four* claims had expired with a prior English patent which had only *one* claim. It was argued on behalf of the appellants as follows (123 U. S. 280);—

> "II. But if it be admitted that this claim is anticipated by the English patent of 1861, this would not invalidate the first three claims of the patent."

In answer to this argument the Supreme Court said;—

> "It is contended by the counsel of the complainants, that the American patent contains improvements *which are not exhibited in the English patent.* But if this were so, it would not help the complainants. The principal invention is in both; and if the American patent contains improvements, this fact cannot save the patent from the operation of the law which is invoked, *if it is subject to that law at all.* A patent cannot be exempted from the operation of the law by adding some new improvements to the invention; *and cannot be construed as running partly from one date and partly from another. This would be productive of endless confusion.*"

The Supreme Court held that the United States *patent* was limited by the prior English patent. The *principle* of the decision in *Siemens' Adm'r.* v. *Sellers, set forth in the words above italicized,* has been followed without exception in all reported cases, except the suit at bar. The decision was made in 1887. As the claims of the home patent,

for patentable inventions, not contained in the foreign patent, were held to have expired with the foreign patent, the law became settled, that *the home patent could not be kept alive as to such features by disclaiming the features of the expired foreign patent.* (*Thomson-Houston Co. v. McLean*, 153 Fed. 883, 886).

The decision in *Siemens' Adm'r.* v. *Sellers* establishes that a patent *cannot* be construed as running partly from one date and partly from another, the *reason* being that *this is contrary to the statute and would be productive of endless confusion.* Hence, the *principle* may be stated, that where a United States patent covers an invention which has been previously patented abroad, the term of the United States patent will expire with the term of the foreign patent, although the United States patent may *claim inventions* consisting of features not described or claimed by the prior foreign patent. Clearly, therefore, the patent in suit expired on November 7, 1902, with German patent No. 53,622, before this suit was begun in July, 1904 (T., p. 76, fol. 228).

As above shown (*supra*, pp. 36-40), the expression "principal invention" was used in antithesis to an invention consisting of claimed and patentable "improvements" upon the original invention which also necessarily consisted of patentable "improvements," merely to refer to and to point out *an* invention, which was found in both the home patent and the prior foreign patent; but the relative importance of the original invention and of the invention consisting of improvements upon it was not considered or stated by the Supreme Court and *in no sense entered into the decision of the case*, which proceeded *solely* upon

the *principle* embodied in the *Statute* that the *term* of the home patent must expire with the term of the prior foreign patent, that the home patent cannot have a *plurality* of terms and "*cannot be construed as running partly from one date and partly from another.*' The decision would have been the same, under the *principle* stated as the *ground of the decision*, had the invention found in both the home and prior foreign patents been the invention consisting of improvements upon the original invention; for whether the prior foreign patent contains only the *invention* consisting of improvements or only the original invention found in the home patent the Statute must apply, since, in either case, the home patent is "granted for *an invention which has been previously patented in a foreign country*" and "*every*" such "*patent*" must expire, that is its *term* must expire, with the expiration of the term of the prior foreign patent. To hold otherwise would defeat the statute and permit an inventor to escape the statute as to inventions consisting of patentable improvements, by patenting only the improvements in a foreign country and the original invention together with the improvements in this country. This is why the lower Courts, following the *principle* of the decision of *Siemens' Adm'r.* v. *Sellers*, have without exception and repeatedly, as will hereinafter appear, directed their inquiry to ascertain whether *any one* invention claimed in the home patent is contained in the prior foreign patent, and have repeatedly stated that "*a patent cannot expire in parcels*," "*cannot expire in part and survive in part.*"

The expression "principal invention" has no application to the facts of the case at bar. Claims

5 and 35, like all other claims, of the patent in suit cover merely "improvements" upon a well developed prior art Berliner was a mere and late improver in the art, and even *his* basic invention is not set forth in those claims but in expired patent No. 372,786 (T., p. 417).

(h). Broadening or narrowing of the claims of an American patent will not prevent the operation of the Statute.

In *Federal Statutes Annotated*, Vol. 5, p. 470 (published by Edward Thompson Co., 1905), the law settled by the decision of *Siemens' Adm'r* v. *Sellers* and other cases following that decision, is stated as follows;—

"*The addition of new improvements* not contained in the foreign patent, or the *broadening or narrowing* of the claims of an American patent, will not prevent the operation of the statute, as *a patent cannot be construed as running partly from one date and partly from another. Siemens' Adm'r* v. *Sellers* (1887) 123 U. S., 276; *Clark* v. *Wilson* (1886) 28 Fed. 95; *Holmes Electric Protective Co.* v. *Metropolitan Burglar Alarm Co.* (1887) 33 Fed. Rep. 254; *Accumulator Co.* v. *Julien Electric Co.* (1893) 57 Fed. Rep. 605; *Brush Electric Co.* v. *Electrical Accumulator Co.* (1891) 47 Fed. Rep. 48."

(i). The test of the question whether an American "patent is granted for an invention" previously patented in a foreign country, is whether an article made according to the description of the invention patented by the foreign patent would infringe the American patent, that is any claim of the American patent.

Judge Townsend failed to apply this test and did

not correctly state defendant's contention in the suit at bar. The learned Judge did not consider whether the "*invention*" described and claimed in the prior foreign patents was claimed in the patent in suit, but merely weighed the relative importance of the different improvements described and claimed in the patent in suit (T., p. 323). The learned Judge, moreover, quoted (T., pp. 322-323) only detached portions of the opinions in *Siemens' Adm'r* v. *Sellers*, *supra*, and in *Western Electric Co.* v. *Citizen's Tel. Co.* (*infra*, p. 141), ignoring those clear, relevant statements upon which the defendant relies and which explained and qualified the portions quoted by the learned Judge. It is respectfully submitted that the courts below failed to apply the statute or to follow the decisions of this Court in regard thereto.

In *Commercial Manufacturing Co.* v. *Fairbank Co.*, 135 U. S., 176, this Court affirmed the decree of the court below, dismissing the bill, and upon the question of identity of invention said;—

> "In regard to the foreign patents the opinion of the Circuit Court says: * * * (p. 194) 'A fair test of the question as to whether the American patent is anticipated by the foreign patents, or is included in them, we think would be: were a person in this country, after the issue of the present American patent, to commence the manufacture of oleomargarine by the precise process *described in the Bavarian or Austrian patents*, supposing that process had not been patented abroad, would the courts refuse an injunction to restrain the use of the process on the ground that it infringed that covered by the American patent? We can hardly deem it possible that any intelligent court would deny an injunction if applied for under such circumstances, and we think this

fairly illustrates the relation of the foreign to the American patent.'

"The conclusion of the Circuit Court was that the plaintiffs' *patent expired* by the *expiration* of the Bavarian and Austrian patents.

"We have carefully considered the arguments urged in the briefs of the counsel for the plaintiffs, in connection with the testimony of their experts, and are of opinion that *the views of the Circuit Court, above quoted, are correct.*"

(*j*). *In determining whether a home patent is granted for an invention previously patented in a foreign country, the precise question is whether* ANY *of the claims of the home patent include the invention or some substantive part of the invention shown by the prior foreign patent. If so, the home patent expires as to all its claims with the foreign patent since a* "PATENT CANNOT EXPIRE IN PARCELS" (*Western Electric Co. v. Citizen's Tel. Co., 106 Fed., 215; Thomson-Houston Co. v. McLean, 153 Fed., 883*).

In *Western Electric Co.* vs. *Citizen's Tel. Co.*, 106 Fed. 215, Judge Severens applied the principles of *Siemens' Adm'r* v. *Sellers* and *Commercial Mfg. Co.* v. *Fairbanks Co., supra*, in accordance with the uniform action of the lower courts following the decisions and opinions of the Supreme Court in those two leading cases. The question before Judge Severens was, whether a United States patent had expired with the expiration of several prior foreign patents to the same inventor. A prior Italian patent had been granted to the same patentee for a term of three years and had expired at the end of the three years. Prior English and French patents had also been granted to the same patentee and

had also expired. Differences existed between the United States patent and the prior foreign patents, and the precise question was whether the United States patent was granted for an invention, *any invention*, covered by the prior foreign patents, and whether the United States patent expired with the prior foreign patents. Judge Severens in deciding that case held that the United States patent was granted for an "*invention*" covered by the prior Italian patent, and, therefore, expired with the Italian patent. As stated in the head note, the *point* of the decision was, whether *any* of the claims of the home patent included any substantive part of the "*invention*" of *the foreign patent*. Head note 1 reads as follows:

> "Where *any of the* claims of a United States patent include *any substantive part of the invention*, on which an independent claim might be founded, *shown by a prior foreign patent*, the former expires with the latter under Rev. St., §4887."

In the course of his opinion, Judge Severens said (p. 217);—

> "The question then is whether the Eldred invention covered by his home patent was patented by the one taken out in Italy, *or, putting it another way, and with rather more precision, do its claims, or any of them, include the invention, or some substantive part of the invention, on which an independent claim might be founded, shown by the Italian patent.* There being no formal claims in the latter patent, it is *prima facie* to be presumed that the law of Italy does not require it. And the further inference arises that whatever is new either in a single element, or in a combination of several elements, such as might stand for a claim under our own statute, would be cov-

ered by the patent. * * * *A careful study of the Eldred Italian patent leaves no doubt that it does embody the very matter of many of the claims of his home patent; that is to say, very many of the claims of the latter could be well founded on the specification of the former.*

* * * (p. 219) "To the British patent are appended nine claims, eight, at least, of which are founded on the *details* of the single exchange office, and are for combinations and congeries thereof. Identical claims are appended to the French patent. With respect to most of those claims, if one were allowed to substitute equivalents, they could be made upon the specifications of the home patent. But, what is more directly to the point, the essence of the patent in suit *contained in the first claim thereof*, namely, the cutting out of the annunciator from the circuit employed for conversation, is embodied in the description of *the invention in the foreign patents.* The construction given in the specification necessarily involves it. The case is, therefore, brought under the operation of the rule, laid down in *Siemens' Adm'r.* v. *Sellers*, 123 U. S. 276, even though it be conceded that there are differences in some details between the foreign and the home patents upon which independent claims might be based. *If the home patent cannot expire in parcels, and the Italian patent, for instance, covered the matter of the first claim of the patent in suit, it necessarily follows that the home patent expired with the Italian patent three years after the issue of the latter, and from this it necessarily results that the complainant must fail, and that the bill should be dismissed.*"

Upon this decision defendant relies. It correctly states the law as held by this court.

The basis of this decision, as appears from the

words in italics, is that the "*home patent cannot expire in parcels,*" following the *rule* of the Supreme Court that a patent "*cannot be construed as running partly from one date and partly from another. This would be productive of endless confusion.*" Such rule is in conformity with the clear unambiguous provision of the Statute. Judge Severens summed up the whole case, when he put the question, *with precision:* Do the claims of the home patent, *or any of them*, include *the "invention" shown by the Italian patent?* Clearly Judge Townsend did not correctly interpret Judge Severens' opinion (T., p. 323), or the opinion of this Court in *Siemens' v. Sellers.*

In *Thomson-Houston Co.* v. *McLean*, 153 Fed. 883, the Circuit Court of Appeals for the First Circuit, as stated in head note 2, held that the United States patent there in suit expired with a prior British patent to the same inventor. The defendant interposed a plea, setting up the expiration of the patent, and a decree was rendered for the defendant and the bill dismissed by the Circuit Court. The Circuit Court of Appeals affirmed the decree. It appears from the opinion of the Circuit Court of Appeals that claim 12, one of the eighteen claims of the United States patent, covered the substance of claim 2 of the prior British patent. Only four of the eighteen claims were in suit, and no patentable difference was found to exist between the four claims in suit and claim 2 of the British patent. Although the precise question before the court in the suit at bar was not raised or passed upon, still it is clear from the opinion of the Circuit Court of Appeals and from the references made by the court to the decision of this Court in *Siemens'* v. *Sellers, supra,*

that the Circuit Court of Appeals was of the opinion, and such is the clear statement in the head note, that the United States *patent* and the eighteen claims thereof did, in fact, expire with the prior British patent because claim 12 of the United States patent covered the substance of claim 2 of the prior British patent. It is also clear that that Court did not regard the reported decision in the suit at bar (146 Fed. 534 and 148 *id.* 1022) as correct or in accord with *Siemens' v. Sellers, supra, as appears from the* Court's statement (153 Fed. 886 and 889) that *Siemens' v. Sellers* was opposed to the proposition that the claims of a patent could expire in parcels.

> (*k*). *The Circuit Court and the Circuit Court of Appeals for the Second Circuit have determined the question, whether a home patent was "granted for an invention which has been previously patented in a foreign country," by ascertaining whether "*ANY ONE *of the inventions" claimed in the home patent is contained in the prior foreign patent, and whether any claim of the home patent would be infringed by the structure of the invention of the foreign patent.*

In *Electrical Accumulator Co.* v. *Brush Electric Co.*, 52 Fed., 130, the Circuit Court of Appeals for the Second Circuit, following *Siemens' Adm'r* v. *Sellers* and *Commercial Mfg. Co.* v. *Fairbank Co., supra*, held that a home patent did not expire with a prior Italian patent, giving as the reason therefor, that *no one* of the *inventions* of the home patent was covered by the prior Italian patent. The Court said (p. 139);—

> "In our opinion, the Italian patent is not the

same in *its* essential particulars with *any one* of the inventions which are claimed in 337,299, and the home 'patent would not be infringed by a structure made in accordance with the provisions of the foreign patent.'"

In the court below (47 Fed., 48, 52), in the same case, Judge Coxe was clearly of the same opinion. In the course of his opinion, he said (p. 52);—

> "Whether the expiration of a foreign patent for an improvement only will operate to overthrow a domestic patent for a broad invention, which contains also a claim covering the improvement, has not, *apparently*, been decided by the Supreme Court. *The language of the Court in Siemens' Adm'r v. Sellers, supra*, is, *perhaps, comprehensive enough to cover such a contingency, but this is a question which need not now be considered.*"

The language of this Court in the *Siemens'* case was *explicit* to the effect that a patent

> *"cannot be construed as running partly from one date and partly from another. This would be productive of endless confusion."*

> *(1) Judge Brown has held, in Sawyer Spindle Co. v. Carpenter, 133 Fed., 238; aff'd, 143 Fed., 976 (1), that a patent cannot expire in part and survive in part; and (2) that a generic claim, covering the specific form of a specie claim and other forms as well, must, under any construction of the statute, expire with the expiration of the specie claim.*

In *Sawyer, Spindle Co. v. Carpenter*, 133 Fed., 238, aff'd, 143 Red., 976, Judge Brown criticized

Judge Thomas' decision in Aquarama Co. v. Old Mill Co., 124 Fed., 229, and said (p. 240);—

> "The defendant contends also that the invention of claim 5 of the patent in suit was not patented by the British patent. It is conceded that the first four claims of the patent in suit and of the British patent are substantially identical, and that the inventions covered thereby are the same. The defendant argues that, though the patent in suit may have expired as to four of its claims, it may still exist as a valid patent for the invention of the fifth claim: citing *Aquarama Co.* v. *Old Mill Co.* (C. C.) 124 Fed., 229. I do not find, however, in the opinion in that case, any reference to *Siemens' v. Sellers*, 123 U. S., 276, where a similar contention was made (page 280, 123 U. S.). The court said (page 283, 123 U. S.):
>
> "'A patent cannot be exempted from the operation of the law by adding some new improvements to the invention, and *cannot be construed as running partly from one date and partly from another. This would be productive of endless confusion.*'
>
> "But assuming *for the sake of the argument only*, that a patent may be limited *in term* by a foreign patent as to some of its claims, and not as to others—that it may expire in part and survive in part—it would still seem impossible that a single claim should in part expire and in part survive. Where the difference between two claims is merely in breadth, the first being a specific claim for a particular embodiment of an invention, and the second being a generic claim which covers the specific form of the first claim, and other forms as well, it follows, upon the expiration of the specie claim, that the specific invention claimed therein can no longer be held to infringe the patent, and that the generic claim has expired in part at least. Two patents and two claims may be regarded as for the same invention,

> though one claims only a special machine, and the other claims broadly a genus which includes the former. *Otis Elevator Co.* v. *The Portland Co.*, 127 Fed., 557 (C. C. A.); *Miller* v. *Eagle Mfg. Co.*, 151 U. S., 186; *Robinson on Patents*, § 464, 465, vol. 2, p. 45. When this is the case, *though the American claim may be broader than that of the prior British patent, it is still true that what is claimed under the generic claim has already been patented in a foreign country.* I can see no reason why the rules which are applied to determine the question of double patenting when United States patents are involved are not also applicable when the question is whether the invention has been first patented in a foreign country."

Judge Brown was clearly of the opinion that *a patent cannot expire in parcels, cannot expire in part and survive in part;* but, under the assumption made by him *"for the sake of the argument only"*, if claims 5 and 35 are generic claims, they must be held to have expired with the specie claims 24-34, covering the construction of the stylus with a wedge-shaped point, so as to permit engagement with the record, and covering the construction and mounting of the stylus, so as to permit the lateral vibrations, substantially as described, since those elements are all embodied in, and permeate, claims 5 and 35.

Although the point may not now be properly before the Court, for the sake of illustration, it may be stated that the Courts below held that the patent in suit was limited to expire with the prior Canadian patent to Berliner, as assignee of Suess (T., p. 325; petition for writ of *certiorari*, p. 42). The question, discussed under Point Nine (*infra*, p. 188), is the *length* of the *term* of the Canadian patent. But the Canadian patent claims the *gen-*

eric as well as the *specific* form of the invention (*supra*, pp. 107-108) and the *specific* form of the invention was previously patented by Berliner, as the assignee of Suess (*supra*, pp. 106-107), by U. S. patent No. 427,279 of May 6, 1890, which expired May 6, 1907, a year after the entry of the decree herein. Since according to the Canadian law (*supra*, p. 135), of which the Court perhaps can take judicial notice, (106 Fed. 215 and 175 U. S. 187, 195-197), the relevant section 8 having inadvertently been omitted from the record, the Canadian patent was limited to expire with any foreign patent for the same invention (*supra*, p. 135), it follows under Judge Brown's decision that the Canadian patent expired May 6, 1907, with the Berliner-Suess U. S. patent and with it claims 5 and 35 of the patent in suit must also have expired under the ruling of the Courts below.

> (m). *Aquarama Co. v. Old Mill Co., 124 Fed., 229 and Westinghouse Co. v. Stanley Co., 138 Fed., 123, merely held that a home patent, granted only for an invention which is a patentable improvement upon an invention covered by a prior foreign patent, or vice versa, is not granted for the invention covered by the foreign patent and does not expire therewith.*

Judge Brown was correct in stating that in Judge Thomas' opinion in *Aquarama Co. v. Old Mill Co., supra*, there was no reference to *Siemens' Adm'r v. Sellers*, 123 U. S., 276. A careful reading of Judge Thomas' opinion discloses, however, that Judge Thomas did *not* hold that a patent can expire in parcels. Such holding would have been contrary to the decision of the Supreme Court in *Siemens' Adm'r v. Sellers*, that a patent "*cannot*

be construed as running partly from one date and partly from another. This would be productive of endless confusion."

An examination of the record and briefs submitted to Judge Thomas, shows that *the only question before Judge Thomas was whether or not the inventions of the United States and of the British patents were the same.* Judge Thomas held, that the United States patent was for an invention which was a patentable improvement upon the invention shown in the English patent. Being a patent for improvements *only*, not set forth in the English patent, it was not granted for an invention previously patented by the English patent, and did not, therefore, expire with the English patent.

In *Westinghouse Co.* v. *Stanley Co.*, 138 Fed 125 (C. C. A.), it was argued by complainants' counsel (see brief on appeal, p. 27) that:—

> "There is no case which decides that a foreign patent for an *improvement* not described or suggested in a United States patent will limit the latter's term."

The court upheld this contention which was unquestionably correct. The improvement, the court said, "was a patentable improvement" and hence the invention of the prior English patent, which was for the patentable improvement, was not the same as the invention of the United States patent which did not cover the improvement for which *alone* the English patent was granted. The United States patent, therefore, was not "granted for an invention" previously patented in the foreign country and the Statute did not reply.

In *Thomson-Houston Co.* v. *McLean*, 153 Fed. 883, 889, the court that decided *Westinghouse Co.*

v. Stanley Co., supra, stated that the foregoing statement of the decision in that case is correct.

The foregoing decisions in *Westinghouse Co.* v. *Stanley Co.* and in *Aquarama Co.* v. *Old Mill Co.* are in accord with the decision of the Supreme Court in *Miller* v. *Eagle Mfg. Co.*, 151 U. S. 186, where the Supreme Court laid down the broad rule that (p. 198):—

> "The result of the foregoing and other authorities is that no patent can issue for an invention actually covered by a former patent, especially to the same patentee, although the terms of the claims may differ; that the second patent, *although containing a broader claim*, more generical in its character than the specific claims contained in the prior patent is also void. . . .
>
> (p. 199) It is also settled that an inventor may make a new *improvement* on his own invention of a *patentable* character, for which he may obtain a separate patent, and the cases cited by the appellee come to this point and to this point only, that a later patent may be granted where the invention is clearly *distinct from*, and *independent* of, one previously patented."

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POINT SEVEN.

Berliner Patent in suit No. 534,543 of February 19, 1895, was granted for inventions previously patented by Berliner in France, by Berliner French patent No. 207,-090, of July 19, 1890. The term of the patent in suit, therefore, expired with the expiration of the term of the prior French patent on July 19, 1905, before the decree for injunction was entered.

(*Assignment of errors 4, 5 and 6, supra, p. 12*).

In the consideration of this important point, we have to do not with "minor details," as stated by the courts below, but with an INVENTION covering *two* of the *most important parts* of the *gramophone*, namely, the REPRODUCER and the RECORDER, for which Berliner secured this prior French patent. It has been shown (*supra*, pp. 35-36), that Berliner, in his lecture before the Franklin Institute, stated that the *recorder* was the *most important apparatus of the gramophone;* and that the *reproducer* is constructed on precisely the same principles as the recorder. It has also been shown (*supra*, pp. 31-36) that, in describing the features of improvement of the patent in suit, Berliner specifically stated that of the *three* principal features of his invention, the *recorder* and *reproducer* formed *two*, the third consisting of the described improvement in recording, wherein alcohol was continuously applied to the recording medium.

Section 4887 of the Revised Statutes and the authorities thereto relating have been set forth under Point Six (*supra*, pp. 127-131). It will now be shown that by this French patent Berliner *pat-*

cuted in a foreign country the important *inventions* embodied in the *two most important parts* of the gramophone, namely, the recorder and the reproducer, and thereafter applied for and obtained the patent in suit, claiming and patenting therein the "*inventions*" previously claimed and patented in the French patent. The patent in suit, therefore, expired, under the well settled law, with the expiration of the prior French patent.

(*a*). *French patent No. 207,090.*

A certified copy of the patent forms one of defendants' exhibits (stipulation, T., p. 542). A copy of the drawings and a translation of the specification of the patent are found in the record (T., pp. 126-131).

That the inventions described and covered by the French patent are identical with inventions described and covered by the patent in suit and for which the patent in suit was granted, appears upon the face of the patents and is shown by defendant's witnesses (Hicks, T., pp. 86-88, 82-85, fols. 256-262, 245-253; Ensign, T., pp. 99-101, fols. 297-363; Leeds, T., pp. 116-119, fols. 348-355).

(*b*). *French patent No. 207,090, according to the French law expired July 19, 1905.*

According to the French Law, the longest duration of a patent is fifteen years (T., p. 176, fol. 527). It appears upon the face of the French patent No. 207,090 of July 19, 1890, that it was granted for the period of fifteen years from that date, (T., p. 126, fol. 377). It was delivered to Berliner on November 11, 1890 (T., p. 126). It is clear, therefore, that the French patent is a prior patent to Berliner for inventions, for which the

patent in suit was granted, that it expired July 19, 1905, and that, if we disregard the expiration of the patent in suit on November 7, 1902, with the prior German patent, the patent in suit expired with the French patent on July 19, 1905.

(*c*). *The description and claims of the prior French patent and of the patent in suit for inventions for which the patent in suit was granted.*

Referring to the specifications and drawings (T., p. 131) the French patent No. 207,090, to Berliner, it appears that Figures 1 and 2 illustrate Berliner's recorder or recording diaphragm and stylus, and that Figures 3 and 4 illustrate Berliner's reproducer or reproducing diaphragm and stylus. Since we have just considered the reproducer in connection with the prior German patent (*supra*, pp. 116-127), it will be more convenient to consider first the reproducer and then the recorder of the French patent, and compare them with the reproducer and recorder of the patent in suit.

The reproducer shown in Figures 3 and 4 of the French patent is identical with the reproducer shown in figures 6 and 7 (T., p. 455) of the patent in suit. There is the same diaphragm B mounted in the same casing A. There is the same leaf-spring FH *bent at right angles so that the face of one part is perpendicular to the face of the other part*. The one part of the leaf-spring faces the face of the diaphragm and is secured at the end to the casing at P, while the free end of the leaf-spring crosses the diaphragm casing edgewise and is *free to vibrate laterally*, just as in the United States patent. Where the leaf-spring crosses the diaphragm casing edgewise the leaf-spring comes

in contact with the casing and presses against the casing. The French patent says (T., p. 127, fol. 381);—

> "In the reproducing sound-box, 3, 4, the extremity of the acoustic spring H, carrying a ring of caoutchouc G, presses against the casing of the sound-box. From the point of view of reproduction this is more advantageous than if the spring were free, as in the recording sound-box, 1, 2."

The leaf spring of the French patent is provided with a ring of caoutchouc or rubber G, just as is the leaf spring of the United States patent, "so that this envelope dampens the individual vibrations of the acoustic spring" (T., p. 128, fol. 383). In the French patent there is the same block M attached to the free end of the leaf spring in which, by means of the set screw N, the stylus O, having the same *wedge-shaped point*, shaped for engagement with the record, is secured in precisely the manner described in the United States patent. Also in the French patent *the leaf-spring is connected with the center of the diaphragm* by the pin I which is secured by the casing L, and the screw Q. The pin I is fixed in the same manner for the connection of the leaf spring with the diaphragm and the same means exist for fixing or regulating the *tension* between the leaf spring and diaphragm. In the tube C, leading from the diaphragm casing, is the perforated diaphragm D to render the tone more clear, just as in the United States patent the perforated diaphragm 114 is inserted in the tube 90 for the same purpose. Thus it appears that the reproducer of the French patent is identical in every particular with the reproducer of the United States patent, and would infringe claims

24-34 of the United States patent quoted *supra* under Point Six, Subdivision (*c*), pp. 118-120.

Referring now to the recorder of the French patent illustrated in Figures 1 and 2 thereof, and comparing it with the recorder of the United States patent illustrated in Figures 4 and 5 thereof, it appears that *every feature of the recorder of the French patent is embodied in and forms part of the recorder of the United States patent.* The eccentricity of the leaf spring in the recorder of the United States patent is a mere detail which, as held in *Clark* v. *Wilson*, 28 Fed. 95, and in *Thomson-Houston Co.* v. *McLean*, 153 Fed. 883, merely narrows the United States patent and brings it within the scope of the French patent.

Moreover, the leaf-spring is so mounted upon the diaphragm and diaphragm casing that its eccentricity can be done away with and the leaf spring made to extend along the line of a diameter of the diaphragm (see Fig. 4, patent in suit; Leeds, T., p. 118, fols. 353-354; Ensign, T., p. 101, fol. 301; Hicks, T., p. 83, fols. 248-249).

What then are the features of the invention of the recorder of the French patent and of the recorder of the United States patent? Referring to figures 1 and 2 of the French patent and to the specification thereof (T., pp. 126-131), it appears that there is the diaphragm B mounted in the casing AA with a tube C leading from the diaphragm casing and having a perforated diaphragm D in the tube to render the tone more clear. Extending across the face of the diaphragm is the leaf spring or acoustic spring FH, composed of two parts F and H joined together so that *the face of the part H is at right angles to the face of the part F.* It will be noted that the leaf spring in the recorder is

formed, not by twisting a single piece of metal so that the parts shall be at right angles the one to the other, but by joining together two separate thin strips of metal so that the parts shall be at right angles the one to the other. The specification of the patent states (T., p. 126, fol. 378) that the acoustic spring FH may be "composed either of two springs placed at right angles the one to the other, as in figures 1 and 2, or of a spring bent as in figures 3 and 4." It is well to observe here that in figures 3 and 4 of the French patent the reproducer is shown having a leaf spring which is bent and in figures 6 and 7 of the United States patent the reproducer is shown having the leaf spring similarly bent; but in *the recorder shown in figures 1 and 2 of the French patent and in figures 4 and 5 of the United States patent the leaf spring or acoustic spring is composed of two parts joined together at right angles* "by soldering or otherwise," as stated in the patent in suit (T., p. 458, line 54). Continuing now with the description of the recorder in the French patent, *the leaf spring is connected with the center of the diaphragm* by the pin I and nuts KK serve to regulate the *tension* between the leaf spring and the diaphragm (T., p. 127, fol. 379). One end of the leaf spring is secured to the diaphragm casing while the other end is *free to vibrate laterally* and crosses edgewise the diaphragm casing. The leaf spring faces with its flat side the face of the diaphragm. In order to dampen the individual vibrations of the leaf spring, one or more bands of rubber G are placed upon it. *The free end of the leaf spring is bent in its normal position, but opens so as to become straight when it presses upon the tablet for the*

recording of the sound waves (T., pp. 127-128, fols. 380 and 383). Such are the features of the recorder of the French patent.

The seven claims of the French patent, broadly covering both the reproducer and the recorder of the patent in suit, are as follows (T., p. 128;—

> 1. An apapratus for *recording* and *reproducing* sound-waves, composed of a diaphragm and of a vibrating spring or leaf placed transversely over the latter and of which one end is fixed while the free end is in contact with the surface recording the sound waves.
>
> 2. An apparatus for *recording* and *reproducing* sound-waves, composed of a diaphragm, of an acoustic spring placed over the diaphragm and attached to it, a spring which is in part surrounded by gutta-percha, felt or by other like material, so that this envelope dampens the individual vibrations of the acoustic spring.
>
> 3. An apparatus for *recording* sound-waves, composed of a diaphragm and of an acoustic spring connected with it, the free end of which is bent in its normal position but opens, so as to become straight, when it presses upon the tablet for the recording of the sound-waves.
>
> 4. An apparatus for *recording* sound-waves, composed of a diaphragm, of an acoustic spring placed over it and of a pin which connects the spring to the diaphragm in such manner that the tension between it and the acoustic spring can be regulated.
>
> 5. An apparatus for *reproducing* sound-waves, composed of a diaphragm, of an acoustic spring placed over it and of a casing at the free end of the acoustic spring, into which casing one point of a needle is fixed in such man-

ner as to be able to be taken out of it and replaced without difficulty.

6. An apparatus for *reproduction* of sound-waves, composed of a diaphragm, of an acoustic spring placed over it and of a casing at the middle of the spring, which casing is traversed by a separate pin establishing the connection with the diaphragm or spring.

7. An apparatus to *reproduce* sound-waves, composed of a diaphragm, of a casing for the diaphragm and of an acoustic spring placed over the diaphragm and connected to it, while its free end presses upon or against the casing.

Referring to the patent in suit and figures 4 and 5 thereof, and the description of the recorder at p. 458, lines 3-109, it appears that the recorder of the United States patent has the same casing 40 and 57, the same diaphragm 56 mounted therein, the same acoustic spring or leaf spring composed of two parts 61 and 62 joined together so that *the parts are at right angles to each other* and one end is secured to the diaphragm casing while the other is *free to vibrate laterally*. The free end 62 is *normally curved, 62', but opens so as to become straight when the stylus impinges upon the record tablet* preparatory to the making of a record (patent in suit, p. 458, lines 93-109.) *The leaf spring is connected with the center of the diaphragm*, and by means of the screw 66, the *tension* of the diaphragm may be regulated. In the tube 39 leading from the diaphragm casing is the perforated disc 67, just as in the recorder of the French patent. While unquestionably the recorder of the United States patent shows some differences and modifications, it is also unquestionably true that *every feature of the*

recorder of the French patent is embodied in, and forms part of the recorder of the United States patent, and the main features of the recorder of the United States patent are all embodied in the recorder of the French patent. In the patent in suit the main features of the invention embodied in the recorder are set forth in claims 7, 9, 10, 25 and 31, which read as follows;—

> "7. In a gramophone, the combination of a sound receiving diaphragm and an elastic recording stylus controlled by the diaphragm and *adjustable with reference to a record tablet so as to press by its own elasticity upon the same at right angles to the plane of its vibratory movements*, substantially as described."
>
> "9. In a gramophone, a recording stylus composed of a leaf spring terminating in a tracing point in combination with one or more elastic non-sonorous dampers, substantially as described."
>
> "10. In a gramophone, a recording stylus formed of a leaf spring terminating in a tracing point in combination with one or more sleeves of soft rubber upon the leaf spring for damping the same, substantially as described."
>
> "25. In a gramophone, the combination of a diaphragm and *a stylus carrier composed of a leaf spring twisted at one point so as to bring the edge of one portion at right angles to the face of the other portion, whereby it is elastic in two directions*, substantially as described."
>
> "31. In a gramophone a recording stylus pivoted to move in response to the vibrations of a diaphragm and elastic in a plane at right angles to such motions, substantially as described."

The foregoing, like the claims of the French pat-

ent, are all broad claims in no way limited by any special details or special improvements of the recorder of the United States patent. *Unquestionably, the foregoing broad claims would be infringed by a recorder made according to the invention of the French patent.*

Claims 6, 8 and 16 of the patent in suit read as follows;—

> "6. In a gramophone, a recording stylus *pressing by its own elasticity* upon the record tablet at right angles to the plane of its vibratory movements and consisting of *a leaf spring* terminating in a point of *harder material* than that of the body of the stylus, substantially as described"
>
> "8. In a gramophone a recording stylus *pressing by its own elasticity* upon the record tablet at right angles to its plane of vibratory movements, and consisting of *a leaf spring* terminating in an *iridium* point, substantially as described."
>
> "16. In a gramophone a sound receiving diaphragm and a tube for conveying sound waves thereto in combination with a recording stylus receiving motion from the diaphragm, and a screw mounted in the sound conveying tube bearing centrally upon the diaphragm for *adjusting the tension* of the latter, substantially as described."

These claims according to the decision of Judge Wheler in *Clark* v. *Wilson*, *supra*, 28 Fed. 95, and *Thomson-Houston Co. v. McLean*, *supra*, 153 Fed., 883, are mere adaptations of the recorder of the French patent not constituting any separate, patentable invention but narrowing the United States patent and bringing it within the scope of the prior French patent.

A stylus "terminating in a point of harder material" or "in an irridium point" had been described in nearly all of Berliner's prior patents and was old. (See English patent No. 7204 of 1888, p. 530, line 20; French patent 190,602, T., p. 124, which is the same as the said English patent; German patent No. 47,099, T., p. 150, fol. 448). On May 16, 1888, in his lecture before the Franklin Institute, Berliner described "an irridium pointed stylus" (T., p. 270, fol. 808; p. 268, fol. 803). To make such a point a part of the recording stylus of the patent in suit was obviously a mere adaptation of the stylus of the French patent, not amounting to a patentable invention and narrowing the United States patent and bringing it within the scope of the French patent.

Claims 11, 12, 13, 14 and 15 of the patent in suit also cover the recorder and are also narrowed by the element of the eccentricity of the stylus carrier or leaf spring. This eccentricity may be a patentable improvement, but under the decisions of the Supreme Court in *Siemens' Adm'r* v. *Sellers*, and other cases cited *supra*, under Point Six, cannot save the patent.

Clearly the *reproducers* covered by the French and United States patents are identical, and clearly the *recorders* covered by the French and United States patents are identical as to the main features thereof. Judge Townsend so found. The French patent has seven claims above quoted, *covering broadly* the recorder and reproducer (T., pp. 128-129). It is familiar law, however, that claims form no essential part of a French patent. There is no requirement for claims in the French law (T., p. 177, fols. 529-530). A French patent should, therefore, be construed as Judge Severens construed the

Italian patent without claims in *Western Electric Co.* v. *Citizens' Tel. Co.*, 106 Fed., 215, quoted *supra* under Point Six. This question, however, is not material, since, it appearing that the *inventions* covered by the French patent are inventions for which the United States patent was granted it matters not whether the claims of the one patent be broader or narrower than the claims of the other patent. The claims of the two patents are equally broad. No case can be found where identity of claims has been made the test. (*Thomson-Houston Co.* v. *McLean*, 153 Fed. 883, 889; *Clark* v. *Wilson*, 26 Fed., 95; *Siemens' Adm'r.* v. *Sellers*, 123 U. S., 276). The test is whether the United States patent was granted for an invention previously patented in a foreign country. This question is answered by determining whether a structure made in accordance with the invention of the foreign patent will infringe the United States patent, that is any claim thereof. If so, the home patent was granted for an invention previously patented in a foreign country and expires with the foreign patent.

(d). Judge Townsend found that French patent No. 207,090 covers the inventions consisting of the improvements of the patent in suit in the recorder and reproducer.

Judge Townsend, in the suit at bar, found (T., p. 320);—

> "The drawings of the German patent are substantially identical with Figures 6 and 7 of the patent in suit and the specifications describe and the claims cover these constructions. The same is true (barring the claims which are immaterial) of said French patent.
>
> * * * * * *
>
> "The French patent and the claims of the

German patent cover improvements in details of the construction of Berliner's *recorder* and *reproducer*."

POINT EIGHT.

The patent in suit and Claims 5 and 35 thereof expired, before this suit was begun, with the expiration of the prior British, French and German patents of November 8, 1887, to Berliner for the so-called "Basic Invention" covered by said Claims 5 and 35.

(*Assignment of errors 7, 8 and 9, supra, p. 12*).

This defence rests upon three prior foreign patents to Berliner, to wit;—

(1). British patent No. 15,232 of November 8, 1887 (T., p. 516), which was granted for the term of fourteen years (T., p. 190) and expired on November 8, 1901. The British patent was published December 31, 1887 and sealed February 17, 1888 (T., p. 82, fol. 244). It was, therefore, previously patented.

(2). French patent No. 186,827 of November 8, 1887 (T., p. 123), which was granted for the term of fifteen years (T., pp. 123 and 176) and expired on November 8, 1902. The description and claims of the French patent are a literal translation of the description and claims of the British patent (T., p. 123, fol. 369). As stated on the face of the French patent (T., p. 123), it was delivered to the patentee, Berliner, on January 26, 1888 and was therefore, previously patented.

(3). German patent No. 45,048 of November 8, 1887 (T., p. 132), which was granted for the term of fifteen years (T., pp. 179 and 145) and ex-

pired on November 7, 1902 (T., pp. 145 and 151). As stated on the face of the German patent (T., p. 132), it was published November 2, 1888 and was, therefore, previously patented.

The drawings of the French and German patents are identical with the drawings of the British patent (T., p. 526); therefore, by stipulation (T., p. 540, fol. 1620), only the drawings of the British patent have been reproduced, and by the same stipulation (T., p. 542, fol. 1624), only the translations of the French and German patents have been reproduced in the transcript of the record on appeal.

Since the British, French and German patents cover one and the same invention, we need consider only the British patent under this point.

Referring to U. S. patent No. 564,586, granted July 28, 1896, to Berliner, on an application filed November 7, 1887 (T., p. 466), it will be seen that Berliner there states (T., p. 466, lines 8-17) that *the invention of that patent, which includes Fig. 10 thereof upon which claims 5 and 35 of the patent in suit are alleged to rest, was previously patented by British patent* No. 15,232 of November 8, 1887, and was an improvement upon the invention described in his first U. S. patent No. 372,786 of November 8, 1887 (T., p. 416).

If the Circuit Court of Appeals was right in holding, in the prior suit, that the application for the patent in suit was a *continuation* of the application for No. 564,586, and that, therefore, Berliner's application for the patent in suit antedated the public use urged as a defence (T., p. 74), then the patent in suit and No. 564,586 must be treated as *one patent* (*Benjamin Co. v. Dale Co.*, 158 Fed. 617; *Barb Wire Patent Case*, 143 U. S. 281; *West-*

inghouse Co. v. Dayton Co., 106 Fed. 726) covering the invention described in the application for No. 564,586, and, since that invention was previously patented by the three foreign patents, the patent in suit expired therewith. Under the reasoning of the Circuit Court of Appeals, either the defence of prior public use (*infra*, p. 215) is good or the patent in suit expired with the three prior foreign patents. It is, however, submitted that both defences are good.

It has been shown (*supra*, pp. 21, 24) that Berliner's British patent described and claimed Berliner's original invention and a second or improved form of the original invention and that in the United States Berliner obtained patent No. 372,786 for the original invention and patent No. 564,586 for the second and improved form thereof. Referring to Judge Hazel's opinion in the prior suit, it will be seen that the defendant in that suit "freely admitted" that the invention covered by claims 5 and 35 of the patent in suit was disclosed in Fig. 10 (T., p. 465) of patent No. 564,586. Judge Hazel said (T., p. 71);—

> "As already appears, the patent in suit was issued upon a later application than patent No. 564,586. *Why the broad claims of the former were not made a part of the earlier application and specification* does not appear."

Upon the same point the Circuit Court of Appeals, in the prior suit, said (T., p. 74;—

> "The specifications in that application (for 564,586) were full enough to warrant the making of the claims here in controversy (5 and 35); at any time the application might have been amended by adding such claims, and in our opinion it is immaterial that instead of

> thus amending it, he took the *broader* claims on another application filed while the first was pending. The second may fairly be considered a *continuation* of the first, and thus Berliner's application antedates the public use."

It will be seen that both Judge Hazel and the Circuit Court of Appeals regarded claims 5 and 35 of the patent in suit as *broad claims* for the invention of patent No. 564,586 and that the Circuit Court of Appeals held said claims to be "*broader*" than any claim contained in patent No. 564,586.

It has already been shown that the alleged *broad* invention of claims 5 and 35 was anticipated by Edison (*supra*, p. 65) and by Bell & Tainter (*supra*, p. 80); that the sound reproducing machine described in the patent in suit and illustrated in Fig. 3 thereof was the invention of Suess and not of Berliner (*supra*, p. 96), except in so far as Berliner incorporated in the Suess machine of Fig. 3 the reproducer of Figs. 6 and 7 previously patented in the German and French patents considered under Points Six and Seven (*supra*, pp. 114, 152); and that complainant's contention in support of the alleged novelty of claims 5 and 35 rests *solely* upon the disclosures made by Berliner in the specification of patent No. 564,586, for which he made application on November 7, 1887 (*supra*, p. 97).

Complainant's contention is that claims 5 and 35 of the patent in suit can be read upon the specification of patent No. 564,586, and Judge Hazel and the Circuit Court of Appeals so held. Claims 5 and 35, moreover, are, according to complainant's contention, and the rulings of Judge Hazel and the Circuit Court of Appeals, "*broader claims*" for the invention of patent No. 564,586, than any claim contained in No. 564,586.

Conceding the correctness of such contention and rulings, it follows that claims 5 and 35 *broadly* claim the *invention* claimed in No. 564,586. Since that invention was previously patented by the British, French and German patents of November 8, 1887, the legal conclusion is that the patent in suit and claims 5 and 35 thereof expired with the expiration of each of the said three prior foreign patents.

It has been shown under Points One and Three (*supra*, pp. 45, 65) that in British patent No. 1644 of 1878 Edison described and *claimed* the sound reproducing apparatus of claims 5 and 35 of the patent in suit and showed that such a sound reproducing apparatus was *equivalent*, in its construction and mode of operation, to a sound reproducing apparatus wherein the pivoted arm carrying the reproducing stylus was connected either with a pin travelling in a spiral guide-groove or with a feed-screw. In Figs. 34 and 37 (T., p. 486) Edison showed a reproducing stylus "free to be vibrated and propelled" by the spiral disc record-groove in the *reproduction* of sound. The devices of Figs. 34 and 37 could not be used for the *recording* of sound in a spiral record-groove, since they were not provided with means to enable a recording stylus to *record* in a spiral line. In Figs. 1, 2 and 11 (pp. 484-485) Edison showed a stylus "free to be vibrated and propelled" by the spiral disc record-groove in the *reproduction* of sound, but the freely-swinging pivoted arm carrying the stylus was connected with a pin travelling in a guide-groove so that the *same instrument* could also be used for the recording of sound. In Figs. 6-10 (T., p. 484) Edison showed a stylus "free to be vibrated and propelled" by the spiral disc record-groove in the

reproduction of sound, but the pivoted arm carrying the stylus was connected with a feed-screw in order that the *same instrument* might also be used for the recording of sound.

As shown under Point Three (*supra*, p. 65), Edison in the first claim of his said British patent of 1878 *claimed all such constructions as equivalents*. The said first claim reads as follows (T., p. 482);—

> "First. The combination with the diaphragm and *point* of a *flat* receiving surface and means for *revolving* the receiving surface, and *causing the point to follow a volute or spiral line*, substantially as represented in Figs. 1, 2, 6, 7, 8, 9, 10 and 34."

The equivalency of the figures referred to in Edison's said claim 1 may be expressed as follows;—

Figs. 1 and 2 equal Figs. 6, 7, 8, 9 and 10, which in turn equal Fig. 34.

From this it appears that the means shown, in the several figures referred to, for *causing the point or stylus to follow the volute or spiral line* of the revolving, flat or disc record were equivalent means. When the instruments were used for *reproduction*, and that of Fig. 34 could be used for *reproduction only*, it was the volute or spiral line of the *record-groove itself* that caused the point or stylus to vibrate and to be propelled along and across the record-groove as the stylus followed the spiral disc record-groove. As explained under Points One and Three (*supra*, pp. 45, 65), the pin moving in the spiral guide-groove of Figs. 1 and 2 and the feed-mechanism of Figs. 6-10, performed no function in the *reproduction* of sound other than that of *permitting* or making the stylus free to follow the spiral, disc record-groove and to be

vibrated and propelled by the revolving *record-groove itself* in precisely the manner of Fig. 34, where no spiral guide-groove or feed-screw was employed. In these *three* different ways Edison *mounted* the reproducing stylus so that it was "free to be vibrated and propelled" by the revolving, spiral, disc record-groove and he described and *claimed* them as *equivalents* in sound reproducing apparatus. So did Bell & Tainter (*supra*, Point Four, p. 80); and *so did Berliner*, as will now be shown.

With this knowledge of the prior art, we are in a position to understand Berliner's description of the second or improved form of his gramophone, set forth in U. S. patent No. 564,586 (T., p. 463) and in the prior British patent No. 15,232 of 1887 (T., p. 516). It is conceded and asserted by complainants that the alleged invention of claims 5 and 35 of the patent in suit was set forth in No. 564,586.

Referring to No. 564,586, it will be seen that the original form af the gramophone shown in No. 372,786 was cylindrical, but that the second or improved form was a *disc* machine (T., p. 466, lines 40-52). The disc machine is shown in Figs. 1 and 10 (T., pp. 463, 465). The machine of Fig. 1 is adapted both for recording and for reproducing. It is, therefore, provided with feed-mechanism to enable the *recording* stylus to record in a spiral record-groove, but the feed-mechanism leaves the reproducing stylus "free to be vibrated and propelled" by, that is to follow, the spiral record-groove when the *same instrument* is used for the reproduction of sound. In Fig. 1, the feed mechanism moves the *recording-tablet* with reference to the point of the recording stylus, while in Fig. 1 of the patent in

suit (T., p. 452) the feed-mechanism moves the *recording stylus* with reference to the recording-tablet, but this variation is immaterial, since the two forms were equivalents, having been described as equivalents for the purpose of recording in a spiral groove, by Edison in 1878 (compare Figs. 2 and 15, for example, with Figs. 12 and 14, T., pp. 484-485), and, as stated by Judge Hazel in the prior suit (T., p. 68, fol. 202), by Bell & Tainter in 1885 (compare, for example, Figs. 1 and 13 of U. S. patent No. 341,-214, T., pp. 387-388). Obviously, whether the recording medium moved under the recording point or the recording point moved over the recording medium, as the tablet revolved in order that a spiral line might be recorded, was immaterial.

In describing the drawings of patent No. 564,-586, Berliner said;—

> "Fig. 1 is a perspective view of my improved gramophone" (T., p. 467, line 7).
>
> "Fig. 10 is a sectional elevation of a *modified form* of my reproducing apparatus" (T., p. 467, line 22).

In other words, *Fig. 10 is described as a modified form of Fig. 1.*

After describing, as he does in the patent in suit, the deposition of a suitable layer of ink upon the disc tablet of glass to form his improved recording medium, and the making thereon of a lateral or phonautographic record by recording, and the copying of that record in solid resisting material by the process of photo-engraving (T., p. 468, line 55, to p. 469, line 45), and the centering of the copied record, which was a metal disc, upon the rotatable support therefor (T., p. 469, lines 46-80), Berliner then describes (*a*) how the disc gramophone of No. 564,586, shown in Fig. 1 and used for recording

the record, may also be used for reproducing sound from the record after it has been copied in solid resisting material and (*b*) how the arrangement shown in Fig. 10 is a mere modification or well known equivalent of the arrangement shown in Fig. 1. Referring first to Fig. 1 and then to Fig. 10, Berliner says (T., p. 469, lines 80-99);—

> "The *stylus* is then adjusted with its point *in engagement* with the outer end of the *record-groove*, and the weight 26 is allowed to descend. It will now be clear that *the stylus will be forced positively to follow the undulations of the record*, and that the diaphragm *vibrating under the stylus* will emit the same sounds which produced the original record, which sounds can be distinctly heard at the ear-piece 34.
>
> Both the process and the *apparatus* thus far described may be *modified in various ways without departing from the main features of my invention*. So, for instance, I can dispense with the centering device and can rotate the record upon a stationary axis, if the diaphragm with its attached stylus is mounted in a manner to make it *follow the spiral record*. An arrangement of this character is shown in Fig. 10."

When the weight 26 of Fig. 1 or of Fig. 10 (T., p. 469, line 109) was allowed to descend, the disc record-tablet provided with a spiral record-groove was, in each case, thereby caused to revolve. The reproducing stylus, being *"in engagement"* with the spiral record-groove was, in each case, *as stated* in the above quoted passage, *"forced positively to follow the undulations of the record,"* or made "to follow the spiral record," solely by the pressure exerted upon the point of the stylus by the walls of the revolving, spiral, record-groove. The two

arrangements, by which there was obtained the freedom of the stylus to follow the record, that is to be vibrated and propelled by the revolving, spiral record-groove, involved in each case the main features of Berliner's invention. The two arrangements were, as above shown, well known equivalents in the art and were recognized by Berliner to be equivalents, since he stated that the described apparatus of Fig 1 might be modified *in various ways* without departing from the main features of his invention.

In claim 8 of the patent No. 564,586 (T., p. 470) Berliner broadly claimed the invention embodied in the two equivalent forms of sound reproducing apparatus illustrated in Figs. 1 and 10. Claim 8 reads as follows (T., p. 470);—

> "In a gramophone, the combination of a sound-receiving *sonorous body;* with a *pivoted stylus* controlled by and controlling the same, and a support adapted to carry a phonautogramic recording-surface, *or a copy of such record* in solid resisting material, *traveling in the plane of vibration of the point of the stylus;* substantially as described."

The above-quoted claim 8 is to be read upon Figs. 1 and 10 of patent No. 564,586 and upon Fig. 3 of the patent in suit. It is also to be read upon Fig. 1 of the patent in suit.

In other words, the invention of Fig. 10 covered by claims 5 and 35 of the patent in suit is also covered by claim 8 of patent No. 564,586. Since claim 9 of the prior British patent No. 15,232 of 1887 (T., p. 524) is identical with the above quoted claim 8 and covers the same invention, it follows necessarily that the patent in suit and claims 5 and 35 thereof expired on November 8, 1904, before

this suit was begun, with the expiration of the legal term of the prior British patent.

An analysis of the elements of claim 8 shows that the "sound-receiving sonorous body" is the diaphragm of said Figs. 1, 10 and 3; that the "pivoted stylus controlled by and controlling the same" is the reproducing stylus of the same three figures; that the "support adapted to carry a phonautogramic recording-surface" or "the copy of such record in solid resisting material" is the rotating glass disc carrying the recording-surface, or the copy of the record in solid resisting material of the same three figures; and that in each of said three figures the copy of the record in solid resisting material, *being a flat disc*, travels, *by rotating*, "*in the plane of vibration of the point of the stylus.*"

It is the *disc* gramophone in its improved form, illustrated in said Figs. 1, 10 and 3, which Berliner claims in claim 8 of patent No. 564,586 and in claim 9, hereafter to be considered, of the prior British patent No. 15,232 of 1887. In *each* of said three figures, the pivoted stylus vibrates *laterally* in the *plane* of the revolving disc record-tablet. The "*vibration* of the point of the stylus" is, in *each* figure, caused solely by the pressure exerted upon the point of the stylus by the walls of the revolving, spiral record-groove which pressure causes or "*forces*," as *stated* in the specifications of both patents, No. 564,586 and No. 534,543, the stylus of *each* of said three figures to follow the spiral record-groove and thus to be propelled across the face of the record.

While it may be true that claims 5 and 35 of the patent in suit are "broader claims" than is claim 8 of No. 564,586, *it is unquestionably true that*

the invention of claims 5 and 35 is covered by claim 8. In claim 8 the diaphragm and the fact that it controls and is controlled by the stylus are mentioned, but all this is implied in claims 5 and 35. In claim 8 the "*traveling*" disc record-tablet is mentioned, and so it is in claims 5 and 35. In claim 8, as well as in claims 5 and 35, the arrangement of the "*travelling*" spiral record-groove and of the reproducing stylus is such that the stylus is in engagement with the record-groove and free to be vibrated and propelled by the walls of the revolving, spiral, record-groove itself. In claim 8, as well as in claims 5 and 35, the "traveling" record-tablet *must* be a *rotating* record-tablet, but no other limitation of the *travel* of the record-tablet is mentioned in or can be assigned to any one of the three claims, *since claim 8, like claims 5 and 35, is to be read upon Fig. 10 as well as upon Fig. 1,* in which the record-tablet rotates upon a stationary or upon a moving axis.

Because the undulations of the spiral record-groove alone vibrate the reproducing stylus, it is the walls of the spiral record-groove which *alone* force the vibrating stylus to follow the spiral groove of the record and to be propelled across the face thereof. If anything other than the record-groove propelled the *stylus*, the undulations of the record-groove could not vibrate the stylus and reproduce the recorded sound. In the reproduction of sound, therefore, the mode of operation of Fig. 1 is precisely the same as that of Fig. 10 and of Fig. 3 of the patent in suit and for this reason Berliner described Figs. 1 and 10 as equivalents and claimed them as such in claim 8.

The novelty, if any, of claims 5 and 35 rests solely, as heretofore shown (*supra*, pp. 49, 54), upon

the freedom of the stylus to be vibrated and propelled by the record. The well-known equivalent means of securing such freedom, explained and referred to by Berliner, are included in claim 8 as well as in claims 5 and 35. The equivalency of such means cannot be open to question because Berliner covered Fig. 1 and Fig. 10 by claim 8.

It being clear that the invention of claims 5 and 35 of the patent in suit is covered and patented by claim 8 of patent No. 564,586, it remains to show only that the same invention was previously patented in the prior British patent No. 15,232 of 1887, of which claim 9 reads as follows (T., p. 524);—

> "9. In a gramophone, the combination of a sound receiving diaphragm or other *sonorous body;* with a *pivoted stylus* controlled by a diaphragm, and controlling the same, and a support adapted to carry a phonautographic record sheet *or a copy of such record*, in solid resisting material, *traveling in the plane of vibration of the point of the stylus*, substantially as described."

Claim 9 of the British patent is identical with claim 8 of the home patent, the "phonautographic record sheet" of the one being the same as the "phonautogramic recording-surface" of the other. For comparison claims 5 and 35 of the patent in suit are here repeated;—

> "5. The method of reproducing sounds from a record of the same, which consists in *vibrating* a stylus and propelling the same *along* the record by and in accordance with the said record, substantially as described."

> "35. In a sound reproducing apparatus consisting of *a traveling tablet* having a

sound record formed thereon and a reproducing *stylus* shaped for *engagement* with said record and *free to be vibrated and propelled* by the same, substantially as described."

Claims 5 and 35, like claim 8, are concededly to be read upon Fig. 10 and the description thereof in patent No. 564,586. They are also to be read, as above shown, like claim 8, upon Fig. 1 and the description thereof in the same patent. In claim 8 of patent No. 564,586, Berliner broadly claimed the main features of his invention, illustrated in Figs. 1 and 10. *The mounting of the stylus in a manner to make it follow "along" the spiral record, or, in other words, so that it should be free to be vibrated and propelled by the spiral record, was inseparately involved in the combination claimed in claim 8 of patent No. 564,586 and in the identical claim 9 of the prior British patent.* The three following propositions are, therefore, clear;—

(1). That *one and the same invention* was claimed by claims 5 and 35 of the patent in suit, by claim 8 of patent No. 564,586 and by claim 9 of the prior British patent.

(2). That the *main features* of one and the same invention were claimed by the said four claims of the said three patents.

(3). That, *therefore*, the patent in suit and claims 5 and 35 thereof expired with the prior British patent.

Complainants attempt to meet this defence by pointing out that Fig. 10 is not shown in the prior British, French and German patents of November

8, 1887. Such fact, however, is clearly immaterial, since none of the four claims under consideration were limited by the details shown in any *specific* device. *Fig. 10 was not shown in the patent in suit any more than it was in the prior foreign patents.* In the patent in suit, to illustrate the invention in question, Berliner chose *Suess' improvement* upon Edison's sound reproducing apparatus of 1878, an improvement consisting in mounting the reproducer upon the horn or sound-conveyer, carried by *Edison's* pivoted, swinging arm (*supra*, pp. 105-106). In patent No. 564,586, Berliner chose the equivalent arrangements shown in Figs. 1 and 10 thereof to illustrate the same invention, broadly claimed in claim 8 thereof. In the prior British patent Berliner chose the same Fig. 1 of patent No. 564,586 (T., p. 526, Fig. 8) to illustrate the same invention, broadly claimed in claim 9 of the British patent which is identical with said claim 8. *The pivoted, swinging arm 88 of Fig. 3 of the patent in suit* (T., p. 454) *was not the invention of Berliner.* To it Berliner can lay no claim whatever. It was first employed by Edison in 1878 and later by Bell & Tainter in 1885 and by Suess in 1888. Berliner took Fig. 1 of the Suess Canadian and United States patents (T., p. 446) and used it as Fig. 3 of the patent in suit, merely substituting therein his reproducer of Figs. 6 and 7 of the patent in suit.

Complainants cannot successfully distinguish the alleged invention of claims 5 and 35 of the patent in suit upon the ground that the Edison-Suess machine of Fig. 3 of the patent in suit differs from machines illustrated in other patents. Whatever else Berliner may have done he did *not* devise the machine of Fig. 3. Claims 5 and 35

must, therefore, if they can be upheld at all, be construed with reference to the known equivalent methods of vibrating a stylus and forcing or propelling it to follow a record-groove.

The decision of this court in the leading case of *Miller* v. *Eagle Mfg. Co.*, 151 U. S., 186, from which the courts below have attempted to break away, is clear authority in support of the present defence. In that case Mr. Justice Jackson, speaking for this court, said;—

> (p. 198). "The result of the foregoing and other authorities is that no patent can issue for *an invention* actually covered by a former patent, especially to the same patentee, *although the terms of the claims may differ:* that the second patent, although containing a *broader claim,* more generical in its character than the specific claims contained in the prior patent, is also void; but that where the second patent covers matter described in the prior *patent essentially distinct and separable* from the *invention covered thereby* and claims made thereunder, its validity may be sustained.
>
> "In the last class of cases it must *distinctly appear* that the invention covered by the later patent was a *separate invention* distinctly different and *independent* from that covered by the first patent; in other words, it must be something substantially different from that comprehended in the first patent. It must consist in something more than a mere distinction of the breadth or scope of the claims of each patent. If the case comes within the first or second of the above classes, the second patent is absolutely void.
>
> "*It is insisted on the part of the appellee that 'whether this invention shall be protected in part of its features by one patent, and as to the rest by another, or shall be completely pro-*

tected by a single patent, is a matter which concerns solely the patent office and the inventor.' Under the rule announced in the foregoing authorities this proposition cannot be sustained.

. . . . "It is settled also that an inventor may make a new improvement on his own invention of a patentable character, for which he may obtain a separate patent, and the cases cited by the appellee come to this point *and to this point only*, that a later patent may be granted where the invention is clearly distinct from, and *independent of* one previously patented."

Under this decision, it would be idle to contend that claim 8 of patent No. 564,586 is not void, since it covers the invention of claims 5 and 35 of the patent in suit, which was previously granted. Hence, the patent in suit necessarily expired with the prior British patent, because claim 9 of the prior British patent is identical with said claim 8.

In the *Miller* case this court held, as will be seen from the passage above quoted from the opinion, that *three classes* of cases must be considered in determining the question whether a patent is granted for an *invention* covered by a prior patent to the same patentee. The three classes are the following;—

First class, in which it is held that the second patent is void if issued for an *invention* actually covered by a former patent, *although the terms of the claims of the two patents may differ.* In other words, it is *the invention*, the main features or substance of the invention, to which we must look and not to the terms of the claims, because although the terms of the claims may differ, the claims may, nevertheless, cover the *same invention*. A patentee

cannot patent by one patent *some features* of his invention and thereafter secure a second valid patent for *other features* of the *same* invention. An inventor can secure only one valid patent for *all* the different features of one invention.

Second class, in which it is held that although the second patent contains a *broader claim* than any claim contained in the first patent, the second patent is void because by patenting the *specific* embodiment of the invention in the prior patent, the patentee's right to protect the invention is exhausted.

Third class, in which it is held that a valid second patent may be obtained for matter described in a prior patent only when it distinctly appears that the invention covered by the later patent was *a separate invention distinctly different from and independent of the invention* covered by the first patent.

Applying these principles to the suit at bar, it is clear that by claim 8 of patent No. 564,586, by the identical claim 9 of the prior British patent, and by claims 5 and 35 of the patent in suit, Berliner patented the same invention and the main features of the same invention.

Berliner said that the apparatus embodying the invention might be modified *in various ways*, two of which he illustrated in Figs. 1 and 10, without departing from the main features of the invention, and such statement was clearly correct in view of the then existing state of the prior art. Under such circumstances, Berliner could not differentiate the one invention, or the different features of the one invention, by illustrating the invention in one patent by one form of apparatus and by illustrating

the same invention in another patent by another form of apparatus which, in the first patent, he said was a mere modification and equivalent of the first form of apparatus. Still more clearly is it true that Berliner in the patent in suit could not *five years later*, in 1892, differentiate the same invention by illustrating it by an entirely different apparatus devised by Suess, who in 1888 supported the reproducer upon the sound-conveyer or horn carried by Edison's freely swinging, pivoted arm of 1878.

The result reached by the courts below is one not permitted by the patent laws, for under their holding, Berliner has secured a monopoly of the *function* of a machine, since claims 5 and 35, as construed by the courts below, cover not only the prior, broad invention of Edison, but also Suess' improvement upon Edison's broad invention. All this Berliner has obtained upon the basis of Fig. 10 which disclosed an impractical apparatus. Fig. 10 is not provided with a reproducing stylus mounted upon a freely swinging, pivoted arm so as to be free to be vibrated and propelled by the spiral record-groove as in the Edison-Suess machine of Fig. 3 of the patent in suit; nor is it, like the Edison-Suess machine of Fig. 3, provided with a universal joint permitting the reproducing stylus to bear or rest by gravity and with yielding pressure upon the record-groove. Fig. 10 does not, therefore, like Fig. 3, permit of the vertical adjustment of the stylus with the record-groove; nor does it, like Fig. 3, disclose any means for supporting the sound-conveyer or horn.

In *McClain* v. *Ortmayer*, 33 Fed., 284, affirmed 141 U. S., 419, a second patent was held void because in it the inventor attempted to patent a part

of the invention previously patented (118 Fed., 573-574). In the second patent a *single* spring and in the first patent a *double* spring, was employed to secure a pad to a horse-collar. Having claimed *two springs* in the first patent, McClain could not obtain a second, valid patent for a single spring. In the Circuit Court, Judge Blodgett held, as stated in head note 2, as follows (33 Fed., 284);—

> "A patent obtained upon a device, upon which a patent had already been obtained, in combination with another exactly similar but *unnecessary* device, *which it required no invention to dispense with, there being no material difference in the mode of operation and result*, presents no patentable novelty, and for that reason is void."

This court was of the same opinion. Obviously in the suit at bar, in view of the prior art and of Berliner's statement of the equivalency of Figs. 1 and 10, of patent No. 564,586, it involved no new invention and created no new mode of operation or result to employ Fig. 10 rather than Fig. 1 in the reproduction of sound. By claim 8 he patented both constructions as equivalents and claim 9 of the prior British patent is identical with claim 8.

In *Miller* v. *Eagle Mfg. Co.*, *supra*, the second patent was held void because the first patent claimed the spring adapted both to lift and to depress the beam, while the second patent claimed the spring adapted to lift the beam. The first patent clearly included the second.

In *Thomson-Houston Co.* v. *Hoosick Ry. Co.*, 82 Fed. 461,468 (C. C. A.), a second patent was held to be void on the authority of the *Miller* case because both patents were intended to secure to the patentee "the same general inventions."

In *Williams Co.* v. *Neverslip Co.*, 136 Fed., 210, 212, Judge Archbald, citing the *Miller* and other cases, decided by this court, held that a mechanical patent for a horseshoe calk was void because a design patent had previously been secured therefor. Judge Archbald said that there was only *one invention* and that the power to protect that invention was exhausted when the design patent was obtained.

In *Dayton* v. *Westinghouse Co.*, 118 Fed. 562, 574, the Circuit Court of Appeals for the Sixth Circuit, following the *Miller* case, said;—

> "This second patent was held void, for the reason that there was no new invention; the inventor having patented *simply a part* of the invention previously patented. . . . .
>
> "And in the *Palmer Pneumatic Tire Co.* case (90 Fed. 732), this court, following the *Miller* case, said:
>
> 'That decision shows that it is not necessary to the rule that patents should be for *co-extensive* inventions, *or that the subject matter thereof should be technically the same.*' "

In *Otis Co.* v. *Portland Co.*, 127 Fed. 557, 559, the Circuit Court of Appeals for the First Circuit said;—

> "Two patents may be regarded as for the same invention, though one claims only a *special* machine, and the other claims broadly a *genus* which includes the former. *Miller* v. *Eagle Mfg. Co.*, 151 U. S., 186, 198."

In *Sawyer Spindle Co.* v. *Carpenter*, 133 Fed., 238, 240, Judge Brown said;—

> "Two patents and two claims may be regarded as for the same invention, though one claims only a special machine and the other

claims broadly a genus which includes the former. *Otis Elevator Co.* v. *Portland Co.*, 127 Fed., 557 (C. C. A.), *Miller v. Eagle Mfg. Co.*, 151 U. S., 186."

Within the authorities above cited claims 5 and 35 of the patent in suit expired with the prior British patent because

(1). Claims 5 and 35 of the patent in suit clearly cover (*a*) the *invention*, and (*b*) *the main features of the invention*, covered by claim 9 of the prior British patent which is identical with claim 8 of patent No. 564,586.

(2). Claims 5 and 35 of the patent in suit being broad, *generic* claims, as held by the courts below, broader than any claim contained in patent No. 564,586 or in the corresponding prior British patent, cover the invention of claim 9 of the prior British patent, which is identical with claim 8 of patent No. 564,586.

Futile effort of complainants' counsel in the courts below to misinterpret claim 9 of the prior British patent and claim 8 of Patent No. 564,586.

Complainant's counsel, in the Circuit Court of Appeals, while admitting that the word "traveling" used in claims 1, 2, 3, 7 and 13 of Patent No. 564,586 referred to the travel of the surface of a tablet due to rotation only, contended that in claim 8 the word "traveling" has a different meaning and refers not to "*a copy of such record in solid resisting material*," but to the support 7 of Fig. 1 of Patent No. 564,586.

Referring to claim 8 of Patent No. 564,586 and to claim 9 of the British patent, it is clear that the combination of those claims consists of the diaphragm, which is the "sonorous body," of the stylus

which is pivoted and which is controlled by and controls the diaphragm, and *either* "a support adapted to carry a phonautographic record-sheet," *or*, "a copy of such record in solid resisting material," *traveling in the plane of vibration of the point or end of the stylus*, substantially as described. The word "traveling" means "rotating" and modifies *either* "a support adapted to carry a phonautographic record-sheet," *or*, "a copy of such record in solid resisting material." The "traveling" referred to is stated to be "in the plane of vibration of the point or end of the stylus." The point or end of the stylus vibrates only in the plane of the glass disc supporting the recording medium or record-sheet or in the plane of the copy of such record. The word "traveling," therefore, refers to the rotation either of the disc supporting the recording medium or of the copy of the record in solid resisting material. In Fig. 10 of Patent No. 564,586, the word "traveling" can have no meaning other than "rotating," since the only way in which the copy of the record in solid resisting material of Fig. 10 can travel is by rotating.

The contention of complainant's counsel that the word "traveling" modifies only the word "support" and that the word "support" refers to the support 7 shown in Fig. 1 of the home patent No. 564,586 and in Fig. 8 of the British patent is untenable. The support mentioned in claim 8 of the home patent is "a support adapted to carry a phonautogramic recording-surface" which is the same as "a support adapted to carry a phonautographic record-sheet" in claim 9 of the British patent. That the support 7 is not a support adapted to carry a phonautogramic recording-surface, *a deposit of ink*, is clear from a reading of the specifications of the

British and home patents. The support 7 serves as a bearing for the bevel-gear 9 (home patent, T., p. 467, lines 43-44; British patent, p. 520, lines 50-51). In the specifications (home patent, p. 466, lines 62-67; British patent, p. 520, lines 24-26) Berliner describes specifically what is meant by a support adapted to carry the phonautographic recording-surface or record-sheet. He says:

> "I have further improved the process by using a transparent plate as a *support* for the non-resisting medium. This plate is, therefore, made either of glass or some other like substance whereby I secure several important advantages."

That the non-resisting medium forms the recording-surface or record-sheet is also specifically described by Berliner (home patent, p. 466, lines 88-91; British patent, p. 520, lines 36-38) as follows:

> "In my improved process, I employ a layer of semi-fluid ink or paint, of such consistency and thickness that it will neither subside or flow spontaneously."

The support referred to in claim 8 of the home patent and in claim 9 of the British patent is, therefore, the support 13 shown in Fig. 1 of the home patent and Fig. 8 of the British patent, being a plate of glass or other like transparent material adapted to carry the recording medium, a layer of semi-fluid ink or paint. The word "traveling" is used in claims 1, 4, 5, 9, 10 and 14 of the British patent and in claims 1, 2, 3, 4, 7, 8 and 13 of the home patent. Reference to these claims shows beyond all question that the support mentioned in claim 8 of the home patent and in claim 9 of the British patent is the traveling plate, the traveling

support, the traveling plate of glass, the traveling support of glass, the rotating disc of glass, &c. In the claims referred to, as well as in the descriptions of the patents, it is distinctly stated that a deposit of ink or like material is put upon the surface of the traveling plate, disc or support and removed therefrom by and in accordance with sound vibrations. Hence it is clear that the word "traveling" used in claim 8 of the home patent and claim 9 of the British patent modifies, and the punctuation shows that it modifies, either "a support adapted to carry a phonautogramic recording-surface," or "a copy of such record in solid resisting material," and that the word "traveling" means "rotating" and that the copy of the record in solid resisting material shown in Fig. 10 can travel only by rotating.

POINT NINE.

Berliner Patent in suit, No. 534,543 of February 19, 1895, expired February 11, 1899, before this suit was begun, with the expiration of the term of six years for which the prior Berliner-Suess Canadian Patent No. 41,901, of February 11, 1893, was granted, and beyond which it was not prolonged.

(*Assignment of error 16, supra, p. 12*).

It is respectfully submitted that the question presented by this point was *decided* by this Court in *Commercial Mfg. Co. v. Fairbank*, 135 U. S., 176, and that the decision of this Court in that case was *binding* upon the Courts below and that they *failed* to follow it.

In that case, a prior *Austrian* and a prior *Bavarian* patent had expired. The original term granted for the Austrian patent was one year from October 31, 1869 and the patent was "*prolonged*" from year to year, and then *permitted* to expire on May 26, 1876 (see record on appeal, pp. 484-486). The Bavarian patent was granted April 8, 1873, "for the space of two years." It was then "*prolonged* (renewed) from April 8, 1875, for another year" and "became void on the 8th of April, 1876, on account of expiration of the granted term" (record on appeal, p. 487). Upon the argument in this Court, as appears from page 3 of appellant's brief by Mr. Offield, the "asserted error" was that the Court below dismissed appellant's bill upon this ground alone, namely, "that the complainant's patent expired April, 1876, by the *expiration* of the Bavarian and Austrian patents."

This court said (135 U. S., 176, 194);—

> "The conclusion of the Circuit Court was that the plaintiffs' patent *expired* by the *expiration* of the Bavarian and Austrian patents.
>
> "We * * * are of opinion that the views of the Circuit Court, above quoted, are correct."

The case came before this Court shortly after the decision in *Bate v. Hammond*, 129 U. S. 151, and immediately after that in *Pohl v. Anchor Brewing Co.*, 134 U. S. 386, and Mr. Justice Blatchford wrote the opinion as he did in the *Bate* and *Pohl* cases, and could not by any possibility have overlooked the point necessarily involved.

According to the Austrian law, in force at the time, (See Carpmael, *Patent Laws of the World*, London, 1885, p. 23), it was provided, by §25, that

"the *longest duration* of privileges is fixed at fifteen years," and, by §27, that "every patentee whose privilege has been granted for a shorter period than the longest (§9 c) may claim its *prolongation* for one or more years within the fixed longest period," and, by §9 c, "that number (of years) cannot exceed fifteen except by a special grant of the Emperor."

In *Gramme Electric Co. v. Arnoux*, 17 Fed. 838, 840, Judge Blatchford had previously ruled upon the precise question and, in holding that a home patent expired with a prior Austrian patent *at the end of the tenth year of prolongation* of the latter, had said that;—

> "*A capacity of being prolonged so as to have a duration of fifteen years is not equivalent to having a term of fifteen years when the patent is granted for one year and then is prolonged so as to expire at the end of ten years.*"

Judge Blatchford's opinion in the *Gramme* case was cited with approval in *Bate v. Sulzberger*, 157 U. S. 1, 31, upon the point of the meaning of "previously patented."

Unquestionably Congress intended, by the enactment of Rev. St. §4887, as stated in *Bate v. Sulzberger*, *supra*, that an invention previously patented in a foreign country should become "free to the American people, whenever, by reason of the expiration of the foreign patent, it becomes free to the people abroad."

Judge Blatchford's opinions in the *Commercial Mfg. Co.* and *Gramme* cases explain clearly why in *Bate v. Hammond*, *supra*, as stated in *Pohl v. Anchor Brewing Co.*, *supra*, this Court limited itself to the *precise* question involved, the Canadian

patent in the *Bate* case having been kept alive for the full period of 15 years and not having been permitted to expire at the end of the original term of five years. The House of Lords in England, in construing the Canadian patent act, has held that a British patent "*expires*" through failure to pay the government fees required to keep a British patent in force and that a Canadian patent for the same invention "*expires*" therewith, (*Dominion Cotton Mills Co. v. General Engineering Co.*, L. R. App. Cas. (1902), p. 570, (quoted *supra*, p. 134), and this Court has left open the question of the "*expiration*" of a British patent under such circumstances (*Hobbs v. Beach*, 180 U. S. 383, 398). Whatever may be the persuasive force, if any, of this decision of the House of Lords, in the construction of Rev. St. §4887, it is clear from the decision in the *Commercial Mfg. Co.* case that the decision in the *Pohl* case does not apply to Austrian, Bavarian or Canadian patents.

> (*a*). *Judge Townsend found that the Berliner-Sucss Canadian patent "discloses and broadly claims the invention covered by the claims here in suit," and "that if this patent expired, as claimed in 1899, the patent in suit expired at the same time."*

The Canadian patent is to be found at pp. 155-175 of the transcript of the record. By stipulation (T., p. 541, fol. 1621), its drawings are the same as those of U. S. patent No. 427,279 (T., p. 446).

Not only does Judge Townsend say in his opinion that this Canadian patent "discloses and broadly claims the invention covered by the claims here in suit" (T., p. 324, fol. 971), but he also says (T., p. 325);—

"But the Canadian patent in terms describes and claims the *broad generic* invention of Berliner covered by the claims here in suit, as will be seen from the following claims:

'5. In an apparatus for reproducing sounds from a record tablet, the combination with a reproducer mechanism consisting of a sound conveying tube and a diaphragm and stylus mounted at one end of the tube; of a freely swinging supporting frame for the said reproducer mechanism, substantially as described.

'7. In an apparatus for reproducing sounds from a record tablet, the combination with a reproducer mechanism consisting of a sound conveyer, and a diaphragm and stylus mounted at one end thereof; of a supporting frame for the said reproducer, loosely pivoted to swing freely both laterally and vertically, substantially as described.

'11. In an apparatus for reproducing sounds from a rotating record-tablet, a reproducing stylus mounted to have a free movement over the surface of the record tablet, substantially as described.'

"I think, therefore, that if this patent expired as claimed in 1899 the patent in suit expired at the same time, upon the authority of the decisions cited above."

Judge Townsend further said (T., p. 327):—

"But . . . . . *if the expiration of the Suess Canadian patent is a complete defense* . . . . . yet I am constrained to grant the injunction in order to permit an appeal and a determination of the questions at the earliest possible moment."

(b). Assuming, as Judge Townsend found, that the Berliner-Suess Canadian patent "dis-

closes and broadly claims the invention covered by the claims here in suit," the patent in suit expired on Feb. 11, 1899, with the expiration of the six year term for which the Canadian patent was granted.

Unquestionably the Canadian patent covers "in an apparatus for reproducing sounds from a rotating record tablet, a reproducing stylus mounted to have a free movement over the surface of the record tablet, substantially as described" (T., p. 167, claim 11). For the movement of the stylus over the surface of the rotating record tablet as described, Suess states that he relies upon the "control of the stylus by the walls of the record groove for the movement of the stylus across the face of the disc, there being no positive feeding mechanism for thus moving the stylus" (T., p. 158, fol. 474). Other claims and other parts of the specification of the Canadian patent likewise show that Suess was the inventor of machines such as the machine of Fig. 3 of the patent in suit and complainants' exhibits of defendant's machines

(c). The invention of the Berliner-Suess Canadian patent was, under the statute and decided cases, patented and caused to be patented by Berliner, the patentee of the patent in suit.

In order that a United States patent shall, under §4887, be limited by a prior foreign patent, it is not necessary that the foreign patent be taken out by the inventor and patentee of the United States patent, but it is sufficient if he *causes* the foreign patent for the same invention to be issued.

The language of §4887 is very broad. It reads as follows:—

> "No person shall be debarred from receiving a patent for his invention or discovery, nor shall any patent be declared invalid, *by reason of its having been first patented or caused to be patented* in a foreign country, unless the same has been introduced into public use in the United States for more than two years prior to the application. But every patent granted for *an invention which has been previously patented* in a foreign country shall be so limited as to expire at the same time with the foreign patent, or, if there be more than one, at the same time with the one having the *shortest term*, and in no case shall it be in force more than seventeen years."

All that is necessary is that the invention be first patented or *caused* to be patented in a foreign country by the patentee or inventor of the United States patent. In *Hobbs* v. *Beach*, 180 U. S., 383, 397, the Supreme Court stated that §4887 "evidently means that the patentee shall not be debarred from *his* patent by reason of *his* having first patented or *caused his* invention to be patented in a foreign country." In *Wilcox Co.* v. *Industrial Co.*, 110 Fed. 210, 214, Judge Gray said "We do not think that §4887 of the Revised Statutes applies to a patent taken out by another than the patentee of the patent whose term is sought to be shortened and *without his acquiescence or consent.*"

Berliner as assignee of Suess took out the Canadian patent, and if claims 5 and 35 of the patent in suit are broad enough to cover the invention of the Canadian patent, since the Canadian patent is a prior foreign patent to Berliner, the patent in suit expired with the Canadian patent on February 11, 1899.

(*d*) *Under the patent act of Canada, a*

Canadian patent "expires," within the meaning of §4887 of the Revised Statutes, at the expiration of the term for which the fee to the Government has been paid, unless a further fee for a "further term" is paid. The patent does not lapse and is not forfeited, but its term expires. The Berliner-Suess Canadian patent was granted for a term of six, and not of eighteen, years, since the granted term depends solely upon the provisions of the patent act.

The material parts of the patent Act of Canada is one of defendant's exhibits (T., pp. 181-188).

According to § 22 of the Patent Act of Canada (p. 184) and of § 39 thereof (p. 187), the applicant has the option of paying the fee for eighteen, twelve or six years. The term of the Canadian patent cannot exceed eighteen years (§ 22 p. 184). In other words, eighteen years is the *limit* of the duration of *any term* of a Canadian patent, but at the option of the applicant the patent may be issued for a shorter term of six years or of twelve years. Sub-division 2 of § 22 of the Patent Act of Canada provides (p. 185);—

> "2. If a partial fee only is paid, the proportion of the fee shall be *stated in the patent* and the patent shall, *notwithstanding anything therein or in this act contained*, cease at the end of the *term* for which the partial fee has been paid, unless, before the *expiration* of the said *term*, the holder of the patent pays the fee required for the *further term* of six or twelve years."

In accordance with this provision of the Canadian act, the grant of the Canadian patent contains the following provision (p. 156, fol. 467);—

> "The partial fee required for the *term* of six

> years having been paid to the Commissioner of Patents, this Patent shall cease at the end of six years from date, unless at, or before the *expiration* of the said *term*, the holder thereof pay the fee required for the *further term* or *terms* as provided by law."

Clearly the payment of the further fee for the further term was a *condition precedent* (*Doepfner v. Bowers*, 55 Misc., 561 and cases cited).

The certificate of the Canadian Patent Office states (p. 169, fol. 507);—

> "that the said patent *expired* upon the 11th day of February, 1899, by reason of the non-payment of the fee for the second *term* of six years."

Under the above quoted provisions of the Patent Act of Canada and of the grant of the Canadian patent, it required no act on the part of the Canadian government to terminate the patent at the end of the six year term.

The grant (p. 156) of the Berliner-Suess Canadian patent "for the period of eighteen years from the date of these presents . . . . provided, that the *grant hereby made is subject to the conditions contained in the acts aforesaid*," means, as stated in the act, that "the patent shall, *notwithstanding anything therein or in this act contained*, cease at the end of the *term* for which the partial fee has been paid, unless before the *expiration* of the said *term*, the holder of the patent pays the fee required for the *further term* of six or twelve years." Clearly the Canadian patent *expired*, under these provisions at the "*expiration of the said term*", *six years*, for which alone it was granted at the *time of its issue*. *Not having been prolonged, renewed or extended, it never had any other term.*

Eighteen years was the limit of time to which it might have been prolonged, but no *further term*, beyond the original term of six years, having been obtained, the patent had but one term of six years and "*expired*" at the "*expiration of the said term.*"

Thus the provisions of the Canadian Patent Act clearly show that a patent may be issued for the term of six years, for the term of twelve years, or for the term of eighteen years, and that in case of a patent issued for the term of six years, the patent will expire by the "*expiration of the said term,*" unless a further fee is paid for a "*further term.*" A patent is a *contract* between the government and the patentee, and the rules for the construction of contracts control in its interpretation (*Seymour v. Osborne*, 11 Wall. 516, 533; *American Co. v. Denning Co.*, 160 Fed. 108, 115). There is *no obligation* by *contract* or otherwise, to pay the further fee for the further term and there is *no forfeiture or lapse* of the patent if the further fee for the further term is not paid. If the further fee for the further term is not paid, the granted term "*expires,*" like the *term* of a *lease* where the option to renew has not been exercised, and the patent, in the language of the Act, will "cease at the end of the *term* for which the partial fee has been paid, unless before the *expiration* of the said *term* the holder of the patent pays the fee required for the further term of six or twelve years." The certificate above quoted says "the said patent *expired.*" For the *lapsing* and *forfeiture* of patents through the non-performance of a condition subsequent or the like, the Canadian Patent Act makes special provision under the separate head of "Forfeiture of Patents" (§ 37, pp. 186-187). Suit is to be

brought by the Attorney General of Canada, etc. (T., p. 186, fol. 558).

> (e). *Under the provisions of the patent act of Canada payment of a further fee for the prolongation of the patent for a further term is a* CONDITION PRECEDENT *to the existence of a term beyond the original term of six years, and not a* CONDITION SUBSEQUENT *operating on non-performance to forfeit the unexpired portion of a term previously granted.*

In *Pohl v. Anchor Brewing Co., supra*, this Court likened the *term* of a *patent*, under Rev. St. §4887, to the *term* of a *lease*, and cited *Oakley v. Schoonmaker*, 15 Wend. 226; *Beach v. Nixon*, 9 N. Y. 35; and *Farnum v. Platt*, 8 Pick. 339, in support of the holding that "expiration" of a prior foreign patent meant expiration of the *term* of the patent by "*lapse of time*" and not the forfeiture or lapsing of the patent by reason of a condition subsequent.

In *Davis v. Gray*, 16 Wall. 229, this Court said;

> "There is a wide distinction between a *condition precedent*, where no title has vested, and *none is to vest until the condition is performed*, and a *condition subsequent*, operating by way of a defeasance. In the former case equity can give no relief. The failure to perform is an inevitable bar. No right can ever vest. The result is very different where the condition is subsequent. There equity will interpose and relieve against the forfeiture, upon the same principles of compensation, where the principle can be applied, giving damages, if damages should be given, and the proper amount can be ascertained."

To the same effect is *Giddings v. Insurance Co.*, 102 U. S., 111.

In accordance with the above stated principle, the distinction between *the forfeiture of a lease*, by reason of a *condition subsequent*, and failure to exercise a right *to renew or prolong a lease*, by performance of a *condition precedent*, is well settled. In *Doepfner v. Bowers*, 55 Misc. 561, the Supreme Court of New York, citing the two above cited decisions of this Court and *Kerr v. Purdy*, 51 N. Y., 629, *Precht v. Howard*, 187 N. Y. 136 and other cases, held that, under a lease containing a covenant for the renewal or prolongation of the lease upon the giving of notice prior to the date of the expiration of the term of the original lease, the giving of the notice within the time stated was a *condition precedent*. The condition not having been performed, the lease and the term thereof expired, no title to a renewal or extension vested, and equity was powerless to grant relief.

Clearly under the provisions of the Patent Act of Canada and of the grant of the Berliner-Suess *Canadian* patent, quoted *supra*, pp. 195-196, the payment of a further fee for a further term was a *condition precedent* to the existence of any term beyond the original term of six years, and the condition precedent not having been performed the six-year term of the Canadian patent, the *only* term it ever had, expired by *lapse of time* at the end of the six years. There was no forfeiture or lapsing of any part of the term of the patent by reason of a condition subsequent or other cause. This is in accordance with the opinions of Mr. Justice Blatchford in the *Gramme*,

Commercial Mfg. Co., *Bate* and *Pohl* cases, cited *supra*.

(f). Judge Townsend erred in holding that the legal term of the Canadian patent did not expire but lapsed or became forfeited in 1899. The Bonsack case, cited by Judge Townsend in support of his ruling, is directly opposed thereto, and the Welsbach case, cited by him in support of his ruling, in no way involved the question at issue.

Judge Townsend correctly stated the rule of law when he said (T., p. 326);—

> "The rule in such cases as I understand it is that the duration of the United States patent is limited by the duration of the legal term of the foreign patent and that it is not limited by any *lapse* or *forfeiture* of any portion of said term by means of any *condition subsequent*.
>
> *Pohl* vs. *Brewing Co.*, 134 U. S., 386.
>
> "In *Bate Refrig. Co.* vs. *Sulzberger*, 157 U. S., 1, the Supreme Court says as follows:
>
> "'But the American patent will be granted upon the condition that, if you obtain the foreign patent first, your invention shall be free to the American people whenever, by reason of the *expiration of the foreign patent*, it becomes free to the people abroad.'"

He erred, however, in considering that the legal term of the Canadian patent did not *expire* but *lapsed* or became *forfeited* by means of a *condition subsequent*. Judge Townsend based his ruling upon the decision of Judge Simonton in *Bonsack Machine Co.* v. *Smith*, 70 Fed. 383, and of the Circuit Court of Appeals for the Second Circuit in *Welsbach Light Co.* v. *Appollo Co.*, 96 Fed., 332.

It is not surprising that Judge Townsend reached his conclusion as he says "*with some hesitation*" (T., p. 326), because his conclusion is directly contrary to Judge Simonton's decision in the *Bonsack* case, and the question decided in the *Welsbach* case was entirely different from the question here involved, as will be seen from the following statement of the decisions in those two cases.

Before taking up the decision in the two cases mentioned, attention should be directed to the word "*permitted*" used by this Court in *Bate Refrig. Co. v. Sulzberger*, 157 U. S. 1, 36, just before the part quoted, as above stated, by Judge Townsend. This Court said;—

> "the American patent expired with the foreign patent, and thereby the American public became entitled to use the invention from the time the foreign public were *permitted* to use it."

As pointed out by Judge Simonton, in the *Bonsack* case as will presently be shown under subdivision (*f*), an inventor "*permits*" the foreign public to use his invention, when by his *voluntary* act he does not avail himself of the *privilege* of prolonging or renewing the original term of the foreign patent, but permits the patent to expire through *lapse of time* at the end of the original term thereof. In the case of a *lapse* or *forfeiture* through *breach of a condition* subsequent, the inventor is *deprived* of his foreign patent and does not, by his voluntary act, *p* *it* the foreign public to use the invention.

> (*g*). *In the Bonsack case it was squarely held that a Canadian patent for which the fee for a five year term only had been paid and*

which was not prolonged by payment of a further fee for a further term before the expiration of the original five year term expired with the expiration of the original five year term and did not lapse or become forfeited.

In *Bonsack Machine Co.* v. *Smith*, 70 Fed., 383 Judge Simonton held that a United States patent expired with the expiration of the five year term of a Canadian patent. At that time, under the Canadian Patent Act, the duration of a Canadian patent could not exceed fifteen years, but the applicant at his option could obtain a patent for the term of five years, or for the term of ten years, or for the term of fifteen years by paying the fee required, and he could, before the expiration of the five year or the ten year term, obtain an extension for another period or term of five years by paying a further fee. That was under § 17 of the Canadian Patent Act which is quoted by Judge Blatchford in *Bate* v. *Hammond*, 129 U. S., 151, 165. Although the duration of the terms was changed at the time the Canadian patent to Berliner was issued from five, ten and fifteen years to six, twelve and eighteen years, nevertheless *the substance of the provisions is identical under each act*, and it is clear that in each case if at the end of the first term a further fee is not paid and a further term secured, the patent ceases through the *expiration of the term* and not by forfeiture or lapsing through the non-performance of a condition subsequent. Judge Simonton, in *Bonsack Machine Co.* v. *Smith*, *supra*, held that under the decision of this Court in *Pohl* v. *Anchor Brewing Co.*, 134 U. S., 381, the word "expire" means "cease to exist because of the termination of the duration of the original grant, and not to mean

cease or determine by reason of some penalty or forfeiture for the non-performance of some condition subsequent." Referring to the cases cited by the Supreme Court to show that the words "expiration of term" mean "expiration by lapse of time" (134 U. S., 381), Judge Simonton in the *Bousack* case also said that "in those cases it was held that the words 'expiration of term' do not mean expiration of term through a forfeiture by breach of a condition, but mean expiration by *lapse of time.*" Accordingly Judge Simonton held that the Canadian patent having been granted for five years and having expired at the end of the five years, and not having been renewed for a further term, had expired, not by forfeiture, but *by lapse of time*, and that, in consequence, the United States patent expired with the expiration of the five year term of the prior Canadian patent. Judge Simonton's decision is the last reported decision upon the point so far as defendant's counsel has been able to ascertain.

In pages 392-395, Judge Simonton exhaustively considers and discusses; first, what is the *term* of a Canadian patent; second, what is the meaning of the word "*expire*" in § 4887 of the Revised Statutes; and, third, when does a Canadian patent, under the Patent Act of Canada *lapse* or become *forfeited*. Judge Simonton's conclusion was; first, that although a Canadian patent could be *prolonged* for successive terms of five years each, not to exceed in the aggregate fifteen years, yet "*each duration of five years is a term independent.* This clearly appears from the language of the act of 1872, and that of the act of 1883 in *pari materia*" (p. 393); second, that the word, "*expire*," as used in § 4887 of the Revised Statutes, means expira-

tion of the term by *lapse of time* and not through a *breach of a condition*, resulting in a *lapse* or *forfeiture* (p. 392), and he pointed out that in *Bate* v. *Hammond*, 129 U. S., 151, the Canadian patent there in question did not "expire" at the end of the original five year term because the patentee, having exercised "the privilege of renewing and extending the term," the original term of five years was converted into a continuous term of ten years and then of fifteen years, and the patent could not be said to "expire" until the expiration of the fifteen years (p. 394); and, third, that where, by the law of Canada, a patent is granted for five years and the privilege of renewing and extending the term is not exercised and the five year term expires, such an expiration of the five year term is not, under the law of Canada, a breach of a condition resulting in a lapse or forfeiture, but *an expiration of the granted term*, because the conditions of forfeiture and penalty are not incurred as they would have been if a patentee had failed to put his invention into operation within two years or had introduced a patented machine from abroad after twelve months, and *because the patentee had never put himself under any obligation by contract or otherwise* to pay the additional sum of money or fee as a *condition precedent* to the exercise, entirely of his own volition and option, of the privilege of renewing and extending the five year term (pp. 394-395). So Judge Simonton concluded that the patentee of the Canadian patent had held his patent five years *"until the term fixed by law had expired by its own limitation"*; that in the *Pohl* case, *and this marks the distinction*, the prior German patent was forfeited because the patentee failed to fulfill a positive *duty* enjoined upon him by statute or by

contract, to wit, the *obligation* to pay the taxes; and that the language of the Supreme Court in *Bate* v. *Sulzberger;*

> "If you have a foreign patent your patent shall cease to protect you, when, by reason of the expiration of the foreign patent your invention becomes free to people abroad"—

applied, since the patentee of the Canadian patent in question—

> "Knowing the condition on which he held his United States patents, he, of his own volition, allowed the new term to *expire* in 1891, not to *lapse* nor become *forfeited*. By his own act he made his invention free to people abroad. It became free thereupon to the people of this country. He lost the protection of Section 4887."

It is difficult to understand how Judge Townsend could have reached his conclusion in the suit at bar, even "with some hesitation" upon Judge Simonton's decision in the *Bonsack* case. If the decision in the *Bonsack* case was correct, the Berliner-Suess Canadian patent *expired* and did *not lapse* or become *forfeited* in 1899, and the patent in suit expired therewith.

> (*h*). *In the Welsbach case the only question involved was whether, where a prior French patent had been forfeited before the grant of the home patent, but after the filing of the application therefor, the home patent was invalid upon the ground of abandonment or other ground arising out of those facts only. The question whether the prior French patent had been forfeited or had expired was not involved, for, concededly, it had been forfeited.*

In *Welsbach Light Co.* v. *Apollo Co.*, 96 Fed., 332, in which defendant's counsel in the suit at bar filed a brief upon the question involved on behalf of the *Kex Incandescent Light Company*, the question, and the *only* question, was whether where a prior French patent had been forfeited *before* the *grant* of the home patent, but *after* the filing of the *application* therefor, the home patent was invalid under the authority of *Huber* v. *Nelson Mfg. Co.*, 148 U. S., 270. An examination of the briefs of Messrs. Choate, Bennett and Wetmore, filed in the Circuit Court of Appeals, shows that the argument proceeded principally upon the question whether the decision of the Supreme Court in the *Huber* case rested upon *abandonment* or whether that decision was broad enough to make invalid any home patent granted after the forfeiture of a prior foreign patent, although the application for the home patent had been filed before the forfeiture of the prior foreign patent. The Circuit Court of Appeals held that the *Huber* case rested upon *abandonment* and that the home patent having been *applied for* before the forfeiture of the prior foreign patent, abandonment was not shown.

Clearly in the Welsbach case, upon which Judge Townsend also relied, *the question here presented was not involved.* The question here is whether the Canadian patent *expired* in 1899, which was four years after the grant of the patent in suit, or whether the Canadian patent became *forfeited* at that date. If there was a mere forfeiture then the decision of the Supreme Court in *Pohl* v. *Anchor Brewing Co.*, 134 U. S., 386, settles the question; but if there was, *by lapse of time, an expiration of the term* for which the Canadian patent was granted, and Judge Simonton so held in the *Bon-*

sack case, then the decision of the Supreme Court in *Bate* v. *Sulzberger*, 157 U. S. 1, applies and the patent in suit expired with the expiration of the term of the Canadian patent in 1899. It is clear, therefore, that Judge Townsend overlooked the question here involved. His examination of the authorities was brief, he says, and this, undoubtedly, accounts for his incorrect statement of the points decided in the *Bonsack* and *Welsbach* cases above referred to.

Under the *principle* of the decision of this Court in *Huber v. Nelson Mfg. Co.*, 148 U. S. 270, Berliner *abandoned* the alleged invention of claims 5 and 35 in suit, when he voluntarily permitted the Canadian patent to expire through his failure to perform the *condition precedent* necessary to secure a *further term* and to prevent the Canadian patent from *expiring*. We learn from the later decisions in *Huber v. Nelson Mfg. Co.*, *Commercial Mfg. Co. v. Fairbank* and *Bate v. Sulzberger*, *supra*, that the decision in *Pohl v. Anchor Brewing Co.*, *supra*, is not to be extended. It was the clear purpose of Congress that an invention, previously patented in a foreign country, should become free to the American people whenever the patentee should permit it to become free to people abroad.

(*i*). *The distinction under § 4887 of the Revised Statutes, between patents granted for a short term and not prolonged before the expiration of the short term for a further term by reason of which the short term and the patent expire by lapse of time, and patents granted for a fixed term subject to forfeiture as a penalty upon breach of a condition subsequent during the term for which the patent*

was granted is well settled by authority in the patent law of this country. Judge Townsend erred in not recognizing this distinction and in not holding under the doctrine of stare decisis that the Canadian patent expired in 1899 with the expiration of the six year term for which it was granted, and which was the only term it ever had.

It is respectfully submitted that it is impossible upon the facts before the court, in view of the express provisions of the Canadian statute, to hold that the Canadian patent lapsed or became forfeited in 1899 and did not expire by lapse of time, within the meaning of §4887 of the Revised Statutes. As will be seen from the cases hereinafter cited the courts have uniformly held, and as Judge Simonton said, this marks the *distinction*, that *where a prior foreign patent is granted for a stated number of years upon the payment of a fee fixed for a term of that number of years, with a right to renew or prolong the patent for a further number of years and up to a number of years beyond which the patent cannot be prolonged, by payment of a further fee as a condition precedent, in such cases, if the patentee does not exercise his right to renew or prolong the patent for a further term or a further number of years, the patent expires by lapse of time, like the term of a lease where the option to renew has not been exercised, and carries with it a United States patent subsequently granted for the same invention. Where, however, a prior foreign patent is granted for a fixed term stated in the original grant and without provision for renewal or prolongation of the term, and the patentee, by reason of the contract*

with the government under which the patent is granted becomes obligated to perform certain conditions such as the payment of an annual tax or to work his invention within a fixed period after the grant of the patent, or is prohibited from introducing the patented article into the country granting the foreign patent, in such case, if the patentee does not pay the annual tax which he is under contract obligation to pay, like the payment of rent under a lease, or otherwise commits a breach of the conditions under which the patent was granted, the patent does not expire by lapse of time, but lapses and becomes forfeited by reason of the breach of condition subsequent. In *Pohl v. Anchor Brewing Co., supra*, the prior foreign patents were French and German patents granted each for the term of fifteen years *under penalty of forfeiture, as a condition subsequent, if the patentee should allow any year to elapse without paying the tax* (Law of France, T., p. 176). Because the patentee failed to pay the annual taxes, the French and German patents became forfeited because of the breach of condition *subsequent;* and, since there was no expiration by *lapse of time* of the terms for which the patents were granted, the Supreme Court held that § 4887 of the Revised Statutes did not apply and that the home patent did not expire at the time when the French or German patent became forfeited.

In the suit at bar, however, the Canadian patent clearly expired by reason of expiration through lapse of time. The term of the Canadian patent, the only term which the Canadian patent ever had, expired by lapse of time. This, as the Court will

see from the authorities cited, brings the case within the statute.

(j). Additional cases in the lower courts, following Judge Blatchford's opinions in Commercial Mfg. Co. v. Fairbank and Gramme Electric Co. v. Arnoux.

In *Western Electric Co.* v. *Citizens' Tel. Co.*, 106 Fed. 215, Judge Severns held, in accordance with the decision of this Court in *Commercial Mfg. Co. v. Fairbank Co., supra*, that a United States patent expired with the expiration of a three year term of a prior Italian patent. According to the law of Italy, the duration of a patent could not in any case exceed fifteen years (Pat. Laws of the World, Carpmael, 1885, p. 288, Art. 11); and "patents granted for less than fifteen years may be *prolonged* for one or more years; the duration, however, of the prolongation added to the duration of the original patent shall in no case exceed fifteen years" (Carpmael, p. 289, art. 12). It is believed that Judge Severen's decision is the last decision involving the principle relied upon.

In *Electric Accumulator Co.* v. *Brush Electric Co.*, 52 Fed. 130, 139, the Circuit Court of Appeals for the Second Circuit assumed under the authority of *Commercial Mfg. Co. v. Fairbank Co., supra*, as Judge Severens held, that, where an Italian patent was previously granted "for the term of three years from September 30, 1882, and *was not prolonged*" (p. 139) and was in force when U. S. patent No. 337,299 was issued (p. 139), the United States patent would have expired with the expiration of the three year term of the Italian patent, if the Italian patent had been granted for "any one of

the inventions" for which the home patent was granted (p. 139).

Judge Coxe, in the same case in the court below, stated the question involved as follows (47 Fed. 48, 52);—

> "Did patents Nos. 337,299 and 265,090 expire with the Italian patent? The Italian patent was * * * issued for a term of *three years* from September 30, 1882. It expired September 30, 1885, never having been *prolonged, renewed or extended.*"

Upon these facts, the only question considered open by Judge Coxe and the Circuit Court of Appeals was whether the home patents and the Italian patent were for the same invention. The question of identity of invention was, therefore, exhaustively examined by both courts, and it appearing, as the Circuit Court of Appeals said, that "the Italian patent is not the same in its essential particulars with *any one* of the inventions which are claimed in 337,299, and the home 'patent would not be infringed by a structure made in accordance with the provisions of the foreign patent'" (52 Fed. 139), it was held that the home patent did not, *for this reason only*, expire with the Italian patent.

In *Edison Co. v. United Co.*, 52 Fed. 300, the Circuit Court of Appeals for the Second Circuit, held (head note 5) that "a prior Canadian patent, issued for 5 years, and extended for the further period of 10 years, should be regarded as having a continuous term for the entire period, and as not limiting the United States patent to any shorter term", following *Bate* v. *Hammond*, 129 U. S. 225, where the Canadian patent had been

kept alive for the full period of 15 years and where as the Supreme Court said later in the *Pohl case* (134 U. S. 381, 385) the court limited itself to the *precise question* involved in view of the fact that the Canadian patent did *not* expire, and that its term was kept continuous by renewals, until the end of the 15 years. Nevertheless the court *again assumed* (52 Fed. 312), that had the renewal of the Canadian patent become impossible at the end of the original term of five years, as contended by defendants, by reason of the lapse of a certain Swedish patent, the United States patent would have expired with the expiration of the 5 year term of the Canadian patent. It cannot reasonably be contended that the Court proceeded on any other theory or principle, since if such was not the theory of the court, it would not have exhaustively examined, in order to decide, the question whether the Canadian patent was effected in duration by the Swedish patent which did not exist when the Canadian patent was granted but was issued afer the grant of the Canadian patent. The court expressly said (p. 312) that "*the soundness of the defendant's contention depends on the meaning under the Canadian law, of the phrase 'where a foreign patent exists,' as used in this (the Canadian) statute.*"

It may be remarked that in the *Edison Co.* case, *supra*, the Circuit Court of Appeals misconstrued the phrase "where a foreign patent exists", as will be seen from the opinion of the House of Lords in *Dominion Cotton Mills Co. v. General Engineering Co.*, quoted *supra*, p. 134, because, instead of following *the clear words of the statute*, the court construed the phrase according to the meaning which

certain Canadian lawyers *supposed* to be the intention and effect thereof.

In *Pohl* v. *Anchor Brewing Co.*, 134 U. S. 381, 385, the court said that the question involved in that case was not the same as that decided in *Bate* v. *Hammond* and was not controlled by the decision in that case, where the court limited itself to the *precise* question involved. In *Bate* v. *Hammond* the Canadian patent had been kept alive for the full period of 15 years and, therefore, it did not expire at the end of the original term of five years. Where, however, the original term is permitted to expire by *lapse of time*, following *Oakley* v. *Schoonmaker*, 15 Wend. 226; *Beach* v. *Nixon*, 9 N. Y., 35 and *Farnum* v. *Platt*, 8 Pick. 339, and is *not forfeited* by breach of a condition subsequent, this Court said in the *Pohl* case and squarely held in the *Commercial Mfg. Co.* case, and the lower Courts following those decisions have held, that the United States patent expires with the expiration of the term for which the prior foreign patent was actually granted and extended, although when the foreign patent expired, the patent might have been extended under the foreign law for a further term. Although in the earlier decisions, among them one by Judge Townsend and one by Judge Wheeler, there was considerable conflict and confusion upon this question, the recent decisions of the courts show that the rule is now uniformly applied as above stated, in accordance with the meaning above explained of the expression "expiration of term" by "lapse of time."

The *term* of a lease *expires*, by *lapse of time and limitation*, if the privilege of renewal is not exercised. In such case, it would be absurd to say that there was a forfeiture by breach of a condi-

tion subsequent. If the privilege of renewal depends upon the optional payment of a certain sum, payment thereof is a *condition precedent* to the existence of, or right to, a new term. Such a payment is widely different from payment of rent during the term of the lease and under the contract *obligation* thereof. Failure to pay rent will act as a *condition subsequent* to forfeit the lease.

The *distinction* between patents, such as French and German patents, which become *forfeited* because of the breach of a condition subsequent, in the non-payment of annual taxes, according to the *contract* under which the patent is granted imposing an *obligation* upon the patentee, and patents which *expire* by lapse of time, such as Austrian, Bavarian, Italian and Canadian patents, because granted for a limited period and not prolonged, renewed or extended by the patentee *at his option*, in the exercise not of a duty but of a privilege, is clear and *well settled* in the patent law of this country. Judge Townsend erred in holding that the patent in suit did not expire in 1899 with the Canadian patent because he overlooked this well settled distinction upon which defendant, under the rule of *stare decisis*, had a right to rely in the investment of its capital and in the conduct of its business, without being subjected to the *disastrous results* of some new interpretation of the law, set forth with great "*doubt*" and "*hesitation*" in order to grant an injunction, destructive of its property and of its right, to permit an appeal to be taken.

POINT TEN.

Claims 5 and 35 of the patent in suit are void because of the public use in 1888, in this country, of the alleged invention thereof, more than two years prior to the filing of the application for the patent in suit on March 30, 1892.

(*Assignment of Errors 24 and 25, supra, p. 12*).

The application for the patent in suit was filed on March 30, 1892 (T., p. 456). The alleged invention of claims 5 and 35 thereof was publicly used in this country in the year 1888, *by Mr. Berliner and by Mr. Martin*, nearly four years before the filing of the application.

In support of this defence the following evidence is relied upon;—

(1). Testimony of Berliner (T., p. 231, Qs. 6-15).

(2). Berliner's lecture of May 16, 1888 before the Franklin Institute (T., p. 269, "Reproducing Apparatus, May, 1888" and p. 268, fols. 802-809).

(3). The article entitled "The Improved Gramophone" published in the *Electrical World* August 18, 1888 (T., p. 274).

(4). Testimony of Mr. Martin, editor of the *Electrical World* (T., p. 191) and of Mr. Wetzler, who wrote the article of August 18, 1888 (T., p. 194), both of whom witnessed and took part in the public use described in said article.

The evidence referred to proves the public uses by *Mr. Berliner* and *Mr. Martin* with the knowledge of the public. Section 4920 of the Revised

Statutes provides that in any action for infringement of a patented invention, the defendant may plead, *inter alia*, as follows;—

> "Fifth. That it had been in *public use* or on sale in this country for more than two years before his application for a patent, or had been *abandoned* to the public."

This provision is the same as section 4886, which provides that an inventor may secure a patent for an invention "not in *public use* or on sale for more than two years prior to his application, unless the same is proved to have been *abandoned*." The public uses by Berliner and Martin, relied upon are set up in the answer (T., p. 37, fols. 111-112).

The well settled law in regard to public use under the Revised Statutes of 1878, incorporating said sections 4920 and 4886, from the law of July 8, 1870, was stated in *Thomson-Houston Co.* v. *Lorain Co.*, 117 Fed., 249, C. C. A., affirming 110 Fed. 654, as follows (head note 1, 117 Fed. 249);—

> "The use of an invention by a subsequent patentee, with the knowledge of the public, more than two years before the filing of his application, renders the patent void for prior public use, unless it is shown by proof that is full, unequivocal, and convincing that such use was experimental for the purpose of perfecting the device; the fact alone that the use was *by the inventor himself* and without profit does not prevent it from being a bar to a patent."

In Walker on Patents (3rd ed., § 94(it is said;—

> "To constitute public use, it is not necessary that more than one specimen of the thing invented should have been publicly used (*Consolidated Fruit Jar Co. v. Wright*, 94 U. S. 94, 1876; *Jones v. Barker*, 11 Fed. Rep. 597,

1882), nor that more than one person should have known of that use (*Egbert v. Lippmann*, 104 U. S. 336, 1881)."

In *Jones v. Barker*, *supra*, Judge Lowell held (11 Fed., 597);—

"Public use, in the sense of the patent law, is proved by a single use by any person not the inventor, or by the inventor in an open way, provided the use is not experimental."

In *Eastman* v. *Mayor*, 134 Fed., 844, 858 (C. C. A.), the court deduced from the decided cases the following propositions upon the question of prior public use;—

"First. An inventor has a reasonable time in which to experiment for the purpose of perfecting the invention and demonstrating its utility.

"Second. The time thus spent, if in good faith, is no part of the two-year statute of limitations.

"Third. The experiments must be made in perfecting the invention as described and shown.

"Fourth. *Experiments made in testing parts of the machine not covered by the invention will not have the effect of extending the two-year period.*

"Fifth. As soon as the invention is completed, viz.: '*in such a condition that the inventor can apply for a patent for it*,' the two-year period begins to run and the application must be made within this period.

"Sixth. *The fact that the invention has been improved since its original embodiment does not demonstrate that it was then embryonic or incomplete.*

> "Seventh. *When a clear case of prior public use is established the burden is on the inventor to prove by convincing proof that the use was experimental.*"

In his lecture of May 16, 1888 before the Franklin Institute, Berliner publicly used the Suess sound reproducing apparatus of May, 1888, which is shown in the cut (T., p. 269). In the course of his lecture Berliner stated to his audience that while he was completing, by etching, the preparation of a sound record, he would let them listen to some phonautograms which he had prepared in Washington within the previous two weeks (T., p. 268, fol. 802). Referring to Suess, who was with him at the time, Berliner described in his lecture the Suess sound reproducing apparatus employed by him during his lecture for the reproduction of sound from sound records, as follows (T., p. 270, fol. 809);—

> "He suggested to mount the sounder on a pivot at some distance from the disk and then let the reproducing groove guide the sounder across the disc over an arc of flat amplitude. This happy idea is embodied in the *present* apparatus, and is a very ingenious adaptation indeed."

In his testimony Berliner said that he employed the Suess "reproducing apparatus, May, 1888" during his said lecture for the reproduction of sound from sound records previously prepared by him (T., p. 232, Q. 13) and he described the construction and operation of the said Suess reproducing apparatus as follows (T., p. 232, Q. 14);—

> "The reproducing diaphragm sound-box was mounted *at the end of a pivoted lever*, to it attached was a *rubber tube* which led to a

horn mounted on the violin music stand. The stylus of the reproducing sound-box was placed into the outer circle of the spiral of the record, and upon turning the table, upon which the record was mounted, *the sound-box was propelled freely across the record-disc by and along the volute of the record.*"

Referring to the article entitled "The Improved Gramophone" published in the Electrical World for August 18, 1888 (T., p. 274), it will be seen that a clear cut illustrating the Suess sound reproducing apparatus in its final form is given. A comparison of this cut with Fig. 1 of the Suess Canadian patent (T., p. 155), which is the same as Fig. 1 of the Suess United States patent (T., p. 446), both of which patents Berliner applied for and obtained as the assignee of Suess, shows that on August 18, 1888, more than three years before the filing of the application for the patent in suit on March 30, 1892, the Suess machine illustrated in Fig. 3 of the patent in suit (T., p. 454), upon which claims 5 and 35 in suit are to be read, because no other illustration of the subject matter of said claims is given in the patent in suit, had been perfected. The article in the Electrical World for August 18, 1888 was written by Mr. Wetzler as a result of the exhibition of the operation of the sound reproducing apparatus given by Berliner in the presence of Mr. Wetzler, Mr. Martin and others, and from explanations given by Mr. Berliner to Mr. Wetzler and Mr. Martin for the purposes of the article (T., pp. 191, 194). As stated in the article (T., p. 274) and as testified to by Mr. Martin (T., p. 191) and by Mr. Wetzler (T., p. 194) Mr. Berliner employed the sound reproducing apparatus in the presence of Messrs. Wetzler, Martin and others for the reproduction of sound. He

also gave to Mr. Martin, upon that occasion, one of the records used for reproducing sound upon the machine (T., p. 193, fol. 577) and Mr. Martin, as well as Mr. Berliner, employed the machine for the reproduction of sound from the records (T., p. 193, fol. 578). A most complete and perfect description of the sound reproducing machine was, at Berliner's instance and request, written by Mr. Wetzler and published broadcast in the *Electrical World* for August 18, 1888, which reads as follows (T., p. 274);—

> "Notwithstanding the simplicity of the etching process that of the *reproducing* apparatus is still greater. As shown in the accompanying engraving there is no gear or machinery of any kind except a small friction wheel which revolves the table having clamped down upon it the reproducing disc. The *reproducing* stylus connected to the diaphragm is permitted *to rest by its own gravity* in the reproducing groove of the record, and when the plate is made *to revolve* it not only *vibrates* the diaphragm and reproduces the sound but it also leads the diaphragm box across the disc from periphery to centre so that *the record groove serves at the same time as a screw instead of a separate gear.* The recording diaphragm and stylus are attached to a lever which is pivoted at a distance of about 18 inches from the centre line of the disc, and as it slowly swings across the disc it describes an arc of very flat amplitude. It may be objected that the motion given by the hand to the disc would not be sufficiently regular but while it is true that it would be desirable to have a motor attached to the machine, there is no difficulty whatever in revolving the disc regularly by hand, and by hanging up a small pendulum to swing before the eyes of the manipulator he can regulate the revolving motion by the swinging of the pendulum."

Unquestionably the sound reproducing apparatus illustrated in Fig. 3 of the patent in suit was in public use as early as 1888, except in so far as the reproducer illustrated in Figs. 6 and 7 of the patent in suit and previously patented in Germany and France, as shown under Points Six and Seven (*supra*, pp. 114, 152), was substituted in Fig. 3 by Berliner for the reproducer shown in the Suess reproducing apparatus of May, 1888 (T., p. 269), and in Fig. 1 of the Suess United States and Canadian patents (T., p. 446), which reproducer employed in the Suess machine is the same as the reproducer employed in defendant's machine charged with infringement (T., p. 296, fol. 886; p. 119, Par. 5th; p. 103, fol. 308). In the consideration of this defence of more than two years prior public use, however, we need not concern ourselves with the construction of the reproducer, since defendant has not used the reproducer of Figs. 6 and 7 of the patent in suit, and since complainants contend, as they must contend upon the question of infringement, that Claims 5 and 35 are not limited by the features of the reproducer shown in said Figs. 6 and 7.

Such being the undisputed facts, proved beyond any possible or reasonable doubt, we are now in a position to consider the rulings of the courts below in the prior suit upon the question of prior public use.

In the prior suit the evidence in support of the defence of more than two years prior public use rested solely upon Berliner's testimony and upon Berliner's lecture of May 16, 1888, before the Franklin Institute. The testimony of Messrs. Wetzler and Martin and the article in the *Electrical World* for August 18, 1888, showing the public use of Suess'

sound reproducing disc gramophone of Fig. 3 of the patent in suit in its perfected form, were not before the courts.

In the prior suits, complainants contended, and Judge Hazel held, erroneously it would seem, that the exhibition of the apparatus during the lecture of May 16, 1888, before the Franklin Institute was purely experimental (T., p. 70, fol. 209). With this holding the Circuit Court of Appeals was not prepared to agree (T., p. 74), and such holding of Judge Hazel was clearly contrary to the decision of the Circuit Court of Appeals in *Thomson-Houston Co.* v. *Lorain Co.* and *Eastman* v. *Mayor, supra.* A comparison of the Suess sound reproducing apparatus of May, 1888 (T., p. 269), with Fig. 3 of the patent in suit shows that in so far as the alleged invention here in controversy is concerned, that invention had been perfected by Suess at the time Berliner delivered his lecture and exhibited and used the apparatus. No change or improvement whatever upon it was ever made or contemplated by Berliner or Suess. Furthermore, Suess' improvement, whereby the reproducing stylus was mounted upon the sound conveyer or horn carried by Edison's freely-swinging, pivoted arm, was perfected before August 18, 1888, and illustrated and described in the article published in the *Electrical World* of that date. The Circuit Court of Appeals disposed of the defence of prior public use made in the prior suit upon a different ground and said (T., p. 74):

> "The specifications in that application (for 564,586) were full enough to warrant the making of the claims here in controversy (5 and 35); at any time the application *might* have been amended by *adding* such claims, and in

> our opinion it is immaterial that instead of thus amending it he took the broader claims on another application filed while the first was pending. The second may fairly be considered a *continuation* of the first, and thus Berliner's application antedates the public use."

Because of this holding of the Circuit Court of Appeals in the prior suit, the defence of prior public use was not open to this petitioner in the courts below, notwithstanding the new evidence interposed in regard thereto. It is respectfully submitted that the Circuit Court of Appeals erred in holding that the application for the patent in suit could be regarded as a *continuation* of the application filed November 7, 1887, for patent No. 564,586.

It is a well settled rule of patent law that the power to amend an application does not include the power to change the nature of the invention, especially where other inventors, whose rights would be prejudiced, have entered the field. The remedy is for the patentee to file a new application, as Berliner did, when he filed the application for the patent in suit which was in no way connected with the previous application of Nov. 7, 1887. *Fig. 3 and the description thereof in the patent in suit are so radically different from Fig. 10 and the description thereof in patent No. 564,586 that the one could not have been introduced as an amendment of the other, within the decided cases* (*Railway Co.* v. *Sayles*, 97 U. S., 554; *American B. T. Co.* v. *National T. Mfg. Co.*, 109 Fed., 976, 1005 and cases cited; *American Co.* v. *Steward*, 155 Fed., 731, 739; *Dodge Needle Co.* v. *Jones*, 153 Fed., 186, 191; *Ide* v. *Carpet Co.*, 115 Fed., 137, 147 and cases cited).

In the American B. T. Co. case, *supra*, Judge Brown said (109 Fed., 1005);—

"I am of the opinion that this patent is invalid for the reasons that *the power to amend an application does not include the power to change the nature of the invention;* that the right to amend or the right to complete an application under section 4894, Rev. St., U. S., *does not give the right to transform completely;* that the only remedy for a radical mistake in substance so serious as to require a transformation so complete as is here shown is *a new application. Rob. Pat.*, §§561, 635; *Consolidated Electric Light Co., v. McKeesport Light Co.* (C. C.), 40 Fed., 21-27; *Railway Co. v. Sayles*, 97 U. S., 554-563, 24 L. Ed., 1053; *Michigan Cent. R. Co. v. Consolidated Car-Heating Co.*, 14 C. C. A., 232, 67 Fed., 121."

In the *Dodge Needle Co.* case, *supra*, Judge Archbald held (150 Fed., 191), that where the nature of the amendment required a new application, *the defence of two years prior public use was to be considered with reference to the date of the new application.*

As shown under Point Five (*supra*, pp. 101-112), Fig. 3 of the patent in suit is a machine of entirely different construction from Fig. 10 of patent No. 564,586. The modes of operation of the two machines are widely different. *Excepting the reproducer shown in Figs. 6 and 7, the machine shown in Fig. 3 of the patent in suit is the gramophone which in the Canadian patent Berliner described and claimed broadly as the invention of Suess.* In Fig. 3 the stylus is carried at the end of a freely swinging, pivoted arm connected with its support by means of a universal joint. By reason of the universal joint the stylus was free to be vibrated and propelled by the revolving, disc, spiral, record-groove precisely according to the construction and mode of operation shown by Edison in his

British patent of 1878 (*supra*, pp. 71-76). Furthermore, by reason of the universal joint, the reproducing stylus was capable of vertical adjustment so that it rested by gravity with a yielding pressure in and upon the spiral groove of the record, as described in the *Electrical World* for August 18, 1888 (*supra*, p. 220), precisely according to the construction and mode of operation shown by Edison in 1878 (*supra*, pp. 71-76), and by Bell & Tainter in 1886 (*supra*, pp. 81-82). In Fig. 3, moreover, a sound-conveyer or horn was carried by the pivoted arm to both of which the reproducing stylus was attached. These important features which made a commercial success of the Suess machine of Fig. 3 were all absent from Berliner's sound reproducing apparatus shown in Fig 10 of patent No. 564,586. The stylus of Fig. 10 was not carried by a pivoted arm but by a carriage moving on rails. The stylus was not capable of vertical adjustment, since the reproducer, of which the stylus was a part, was suspended from a fixed horizontal rail by means of wheels rolling upon the rail. The stylus, therefore, did not rest by gravity and with a yielding pressure in and upon the spiral groove of the record. For these reasons the apparatus of Fig. 10 was impractical and was abandoned by Berliner, who lost the only apparatus ever constructed by him in accordance with Fig. 10 (*supra*, pp. 102, 111). Fig. 3 is further to be distinguished from Fig. 10, in that the reproducer of Fig. 3 is that shown in Figs. 6 and 7.

There is no statement in the patent in suit in any way connecting the application thereof with the application filed November 7, 1887 for No. 564,586. On the contrary, Berliner stated in the patent in suit (T., p. 456, lines 8-16) that the invention of

the patent in suit was an improvement upon the gramophone patented in No. 382,790, of May 15, 1888. The invention of the patent in suit was, therefore, subsequent in date to May 15, 1888, and the prior application of November 7, 1887 could not have been intended to cover it.

The application for the patent in suit was not filed as a *division* of the application filed November 7, 1887 (see patent in suit, T., p. 472). It also appears from the findings of Judge Hazel and the Circuit Court of Appeals in the prior suit, in evidence in this suit (T., pp. 71 and 74), that the claims here in controversy were never made upon the prior application. Such findings were in accordance with the file-wrappers and contents of the patent in suit and of Patent No. 564,586 (see record on appeal in prior suit, pp. 157, 275; 145 Fed., 350). It is the fact, and there was no evidence in the prior suit or in this suit to the contrary, that the features of the claims here in controversy, 5 and 35, as construed by the Circuit Court of Appeals, were first made the basis of an application for a patent and claimed in the application for the patent in suit, filed March 30, 1892.

Fig. 10 and the description of Fig. 10, contained in the application of November 7, 1887, are not contained in the patent in suit, but an entirely different sound reproducing apparatus and an entirely different description thereof are set forth in the patent in suit. If Judge Hazel was correct in upholding complainants' contention that the use of the Suess reproducing apparatus of May, 1888, exhibited by Berliner before the Franklin Institute on May 16, 1888, was an experimental use, it follows that the invention was not complete on May 16, 1888, and was not, therefore, complete when the

prior application was filed on November 7, 1887. The prior application could not, therefore, have been an application for the invention of Fig. 3 of the patent in suit or of any part thereof.

The fact is that when on March 30, 1892, Berliner filed the application for the patent in suit, he had abandoned the impractical apparatus shown in Fig. 10 of the application filed November 7, 1887, and no connection whatever existed between the application for the patent in suit and the application of November 7, 1887. Had Berliner attempted by amendment, to introduce in the application of November 7, 1887, Fig. 3 and the description thereof of the patent in suit the amendment would have been rejected as new matter.

In *Railway Co.* v. *Sayles*, 97 U. S., 554, this Court said, as stated in head notes 5 and 6:

> "5. The original application for letters-patent (with its accompanying drawings and model), filed by an inventor, should possess great weight in showing what his invention really was, especially when it remains unchanged for a considerable period, and is afterward amended so as to have a broader scope. *Amendments embracing any material variation from the original application—anything new, not comprised in that—cannot be sustained on the original application, and should not be allowed; otherwise, great injustice might be done to others who may have invented or used the same things in the meantime.*
>
> "6. The law does not permit enlargements of an original specification any more than it does where letters-patent already granted are reissued. It regards with jealousy and disfavor any attempt to enlarge the scope of an application once filed, or of letters-patent once

granted, the effect of which would be to enable the patentee *to appropriate other inventions made prior to such alteration, or improvements which have gone into public use.*"

But irrespective of these considerations, the fact is that Berliner filed his application for the patent in suit on March 30, 1892, more than two years after the sound reproducing apparatus illustrated in Fig. 3 and covered by claims 5 and 35, had been publicly used. Unless, as contended under Point Eight (*supra*, p. 164), the alleged invention covered by claims 5 and 35 of the patent in suit was patented by claim 8 of patent No. 564,586, and by claim 9 of the prior British patent No. 15,232 of November 8, 1887, Berliner never made any claim upon any application for the alleged invention of claims 5 and 35 until he filed the application for the patent in suit on March 30, 1892.

As will be seen from an examination of the authorities collated by the Circuit Court of Appeals in *Hayes-Young Co.* v. *St. Louis Co.*, 137 Fed., 80, 82, 83, and *Western Elec. Co.* v. *Sperry Co.*, 58 Fed., 186, 191, 192, in cases where a second application has been held to be a *continuation* of a first application and to relate back to the date of the first application, it has appeared (1) that the invention described and claimed in the second application was *claimed* as well as described in the first application (56 Fed., 714; 79 Fed., 80; 34 Fed., 328, 333; 11 Fed., 859); (2) that special circumstances existed *connecting* the second application with the first application and showing that the second application was in fact, and was intended to be, a *division* or continuation of the first application (56 Fed., 714; 79 Fed., 80; 11 Fed., 869; 68 Fed., 544); (3) that between the filing of the first

application and the filing of the second application the applicant had not *abandoned* the invention described and claimed in the second application or done any ing *estopping* him from making claim thereto; and (4) that the invention was *complete* and not merely experimental, when the first application was filed.

In the case at bar, however, it appears (1) that Berliner, in his application filed November 7, 1887, for patent No. 564,586, described the alleged subject matter of claims 5 and 35 of the patent in suit, as a mere modification, retaining the main features, of the invention described and claimed in Patent No. 564,586, but made *no claim* for such modification; (2) that no circumstance appears *connecting* the second application for the patent in suit with the first application for No. 564,586, or showing that the second application was in any sense whatever a *division* or continuation of the first application; (3) that *between* the filing of the first application for Patent No. 564,586 on November 7, 1887, and the filing of the second application for the patent in suit on March 30, 1892, Berliner, as appears from the following Eleventh Point (*infra*, p. 230), *abandoned* the alleged invention, and, as the assignee of Werner Suess, *asserted*, in an application filed May 5, 1891, for Letters Patent of Canada, that the invention held by the Circuit Court and the Circuit Court of Appeals to be the invention covered by claims 5 and 35 of the patent in suit, and illustrated by Fig. 10 of Patent No. 564,586, was broadly the sole invention of Werner Suess; and (4) that the invention was *not complete, as complainants contended and Judge Hazel held*, when the first application was filed on November 7, 1887. *Two years' prior public use and abandon-*

ment are clear (*Western Elec. Co.* v. *Sperry Co.*, 58 Fed., 186, 191, 192).

Additional authorities upon the question of more than two years prior public use.

Eastman v. Mayor, 134 Fed. 844 and cases cited; *Leticlier v. Mann*, 91 Fed. 917; *Young v. Clipper Co.*, 121 Fed. 560 and 130 Fed. 150; *Bradley v. Eccles*, 138 Fed. 911 and 144 Fed. 90; *Jenner v. Brown*, 139 Fed. 556.

In the following cases one application was held to be a continuation of another, because the second was either a *division* or a *renewal* of the first: *Godfrey* v. *Eames*, 1 Wall. 317; *Smith* v. *Goodyear*, 93 U. S., 500; *Graham* v. *McCormick*, 11 Fed. 859; *Ligowski Co. v. American Co.*, 34 Fed. 328; *Frankfort Co. v. Mill Co.*, 37 Fed. 533, 539; *Stirling Co.* v. *St. Louis Ass'n*, 79 Fed. 80.

In each of these cases the matter claimed in the second application was described and *claimed* in the first application.

POINT ELEVEN.

Claims 5 and 35 of the patent in suit are void, because, if Berliner ever had any right to the alleged invention of said claims, he had irrevocably abandoned his right thereto before the filing of the application for the patent in suit on March 30, 1892, and before the patent was issued on Feb. 19, 1895.

Assignment of errors 12 and 13, supra, p. 12, which read as follows:—

> "12. In not holding that Berliner had abandoned the invention claimed in claims 5 and 35

of the patent in suit, No. 534,543, *before he applied* for a patent therefor.

13. In not holding that Berliner had abandoned the invention claimed in claims 5 and 35 of the patent in suit, No. 534,543, *before the patent was issued.*"

The evidence of *abandonment* is convincing and complete. It is as follows;—

(1) Berliner's claim to the alleged invention of claims 5 and 35 rests *solely* upon Fig. 10 of patent No. 564,586, granted July 28, 1896 upon an application filed Nov. 7, 1887 (T., p. 466).

(2) The apparatus shown in Fig. 10 (T., p. 465) differs substantially from that shown in Fig. 3 of the patent in suit (T., p. 454), being different in construction and mode of operation, as explained *supra*, pp. 224-225.

(3) The apparatus shown in Fig. 10 was impractical and never went into use (*supra*, pp. 111-112). Berliner made only one model which he discarded and lost (*supra*, p. 102). As early as May 16, 1888, he was employing the machine invented by Suess (*supra*, p. 105).

(4) Berliner never claimed in any patent an apparatus such as that shown in Fig. 10, consisting of a reproducing stylus mounted on a carriage moving on rails, in combination with a revolving record-tablet. Such an apparatus is neither shown, described nor claimed in the patent in suit and no claim therefor is to be found in No. 564, 586 since claim 8 of the latter patent is a broad claim not limited by a stylus mounted on a carriage moving on rails (*supra*, pp. 173-176).

(5) In the article published in the *Electrical*

World for Nov. 12, 1887, Berliner gave to the public a complete description of the apparatus shown in Fig. 10 (*supra*, p. 99; and T., p. 244, top of 2nd col.). Berliner himself prepared the article (T., p. 230, Q. 3). Nothing further was ever heard of such an apparatus as that shown in Fig. 10.

(6) When Berliner delivered his lecture of May 16, 1888, before the Franklin Institute he stated that he had adopted the Suess machine in lieu of that described in the *Electrical World* for Nov. 12, 1887 and it was the Suess machine that he publicly described and used to illustrate his lecture (*supra*, p. 105; and T., p. 270, fol. 809).

(7) In the article published in the *Electrical World* for August 18, 1888, as the result of an exhibition and information given by Berliner for the purpose, Berliner gave to the public a perfect illustration and description of the Suess machine of Fig. 3 of the patent in suit in its perfected form (*supra*, p. 220; T., p. 274). This was nearly *four years* before the filing of the application for the patent in suit.

(8) On August 6, 1889, nearly *three years* before the application for the patent in suit was filed, Berliner, as the assignee of Suess, applied for U. S. patent No. 427,279, which was issued May 6, 1890 (T., p. 446). In this patent Berliner again gave to the public a perfect illustration and description of the Suess machine of Fig. 3 of the patent in suit.

Within the authorities hereinafter cited, it is submitted that, under Rev. St. § 4886, *abandonment* results as well from the *publication* of such clear, accurate and full descriptions of an inven-

tion as those set forth in the *Electrical World* for August 18, 1888 and in the Suess U. S. patent No. 427,279 of May 6, 1890, as from a prior *public use*, especially when *more than two years* intervenes between the publication of the description and the filing of the application for a patent. It is well settled that if a patent issues describing, but not claiming, an invention, the invention described and not claimed is dedicated to the public, and that no valid second patent can be obtained therefor upon an application filed *at any time* after the issue or publication of the first patent (*Swift* v. *Jenks*, 29 Fed., 642; *Holmes Co.* v. *Metropolitan Co.*, 33 Fed. 254; *Kinnear Mfg. Co.* v. *Wilson*, 142 Fed. 970, 973, C. C. A. and cases cited; *Thomson-Houston Co.* v. *Elmira Co.*, 71 Fed., 396, 404 C. C. A. and cases cited; *Independent Co.* v. *Jeffrey Co.*, 76 Fed. 981, 990 and cases cited; *Comptograph Co.* v. *Universal Co.*, 142 Fed. 539, 543; *Thomson-Houston Co.* v. *Ohio Co.*, 80 Fed. 712, 725, 728; *Ide* v. *Carpet Co.*, 115 Fed. 137, 147 C. C. A. and cases cited.)

The issue of a patent describing but not claiming an invention is *evidence of abandonment by publication*, which will defeat a second patent issued upon an application filed *at any time* and within *less* than two years after the issue of the first patent. Where an inventor puts the public in possession of an invention, by *publication* and without notice of his claim thereto, and thereby leads the public to believe that he does not claim the invention, such conduct amounts to abandonment and estops the inventor from thereafter obtaining a patent for such invention. The intention to abandon may be manifested otherwise than by words (*Planing Machine Co.* v. *Keith*, 101 U.

S. 479), as by conduct (*Kendall* v. *Winsor*, 21 How., 328); and there may be an abandonment *after* an application for letters-patent has been filed and *while* the application is still pending or after a patent has been granted (*Planing Machine Co.* v. *Keith*, *supra*, and cases cited *infra*, p. 238). Berliner filed his application for No. 564,586 on November 7, 1887, but he never claimed in that application an apparatus such as that shown in Fig. 10, consisting of a reproducing stylus mounted on a carriage moving on rails, in combination with a revolving record-tablet. He did not file his application for the patent in suit until nearly five years later when he described and showed not Fig. 10, but the Edison-Suess machine of Fig 3 of the patent in suit. In the meantime he put the public in possession of the invention and asserted that the invention belonged to Suess, *thereby leading the public to suppose that as far as he was concerned, he had no claim to the invention. Such conduct is abandonment which will defeat a patent* (*Planing Machine Co.* v. *Keith*, *supra*, and cases cited *infra*, p. 236).

(9) *We now reach the culminating proof of abandonment.* On May 5, 1891, about one year before the filing of the application for the patent in suit, Berliner, as the assignee of Suess, applied for the Canadian patent No. 41,901 (T., p. 155), which was issued on Feb. 14, 1893, two years before the patent in suit was issued on Feb. 19, 1895. In this Canadian patent Berliner disclosed and *broadly claimed*, as the invention of Suess, the invention of claims 5 and 35 in suit. The claims and description of the Canadian patent and the finding of the Courts below to the effect that the Canadian patent "describes and *claims* the broad

generic invention of the claims here in suit" have been fully set forth, *supra*, pp. .

The claims of the Canadian patent are a climax to the other facts showing that the invention belonged to Suess and that if Berliner had any claim whatever to the invention, he had irrevocably abandoned it and had taken a position so inconsistent with any claim on his part for the invention that he could not thereafter be heard to claim it.

(10). When Berliner filed his application for the patent in suit on March 30, 1892, the world was in possession of a gramophone such as that shown in the Suess Canadian patent, and had been in possession thereof since August 18, 1888, at least, when Suess' machine was disclosed to the world in its perfected form in the article in the *Electrical World* of that date.

It is respectfully submitted that in consideration of the facts and circumstances above referred to, no clearer case of abandonment, could be made out.

Assuming that claims 5 and 35 of the patent in suit are not to be limited by Berliner's improvements in the construction of his reproducer, and that when correctly construed they cover the invention described and broadly claimed by Berliner in the Canadian patent as the invention of Suess, it is clear that Berliner *irrevocably abandoned* all claim to the invention when he filed the application for the Canadian patent *as the assignee of Suess*, nearly a year before he filed the application for the patent in suit, and that when he filed the application for the patent in suit, he was *estopped* from claiming as his own the invention, which, in the Canadian application, he alleged to be the in-

vention of Suess. Neither Judge Townsend nor the Circuit Court of Appeals has shown how claims 5 and 35 of the patent in suit can, under the facts disclosed, be construed to cover the identical invention described and broadly claimed by Berliner in the Canadian patent as the invention of Suess; nevertheless, they have so construed the claims. Neither Judge Townsend nor the Circuit Court of Appeals has explained how, under the circumstances, *abandonment* of the invention by Berliner and *estoppel* are not clearly made out. It is respectfully submitted that the evidence conclusively shows *abandonment* of the invention and *estoppel*.

Authorities Upon the Question of Abandonment and Estoppel.

> "A party cannot occupy inconsistent positions; and where one has an election between several inconsistent courses of action, he will be confined to that which he first adopts. Any decisive act of the party done with a knowledge of his rights and of the fact, determines his election and works an estoped" (*Bigelow on Estoppel*, p. 578, ed. of 1872; *Smith's Leading Cases*, vol. 2, p. 735, Am. ed. 1873).

When Berliner made the Canadian application, *as the assignee of Suess*, he was in a position where he could not keep silent and thereafter claim the invention, which, as he then asserted, belonged to Suess.

In *Consolidated Fruit Jar Co.* v. *Wright*, 94 U. S., 92, this Court held that Mason at the time of his application for the patent there in question, had abandoned his invention to the public. The public was in possession of the invention in question, from sources entirely independent of Mason, before Mason applied for his patent; that is to say, Mason

having made his invention and having communicated it to others, the public had thereby come into possession of the invention. Such action on Mason's part was held to constitute an abandonment. On the question of estoppel, this Court said (p. 96);—

> "He who is silent when he should speak must be silent when he would speak if he cannot do so without a violation of law and injustice to others."
>
> "The supineness of the patentee is unexplained and inexcusable. *A principal akin to equitable estoppel applies.*"

By reason of Berliner's applications in the United States and Canada, *as the assignee of Suess*, and especially by reason of the broad claims of the Canadian patent, Berliner asserted, *and the assertion was in accordance with the truth*, that Suess was and Berliner was not, the inventor of gramophones such as complainants' exhibits of defendant's machines. This, it is confidently asserted is more than mere abandonment and estoppel; it is a concession and admission that Berliner himself had no right to claim the invention.

In *Huber v. Nelson Mfg. Co.*, 148 U. S., 270, abandonment of an invention in England was held to be an abandonment thereof in the United States.

In *Hutchinson v. Everett*, 26 Fed., 531, Judge Blodgett had occasion to pass upon the question of abandonment arising out of facts very similar to, but not so conclusive as, those in the suit at bar. Judge Blodgett, as stated in head notes 1, 2 and 4, held as follows:

> "1. Where one made, in 1874, a device which was claimed to embody an invention patented

to another in 1879, which earlier device never went into practical use, *held*, that the 1874 device was an abandoned experiment, and was not sufficient to defeat the patent" (*Railway Co. v. Sayles*, 97 U. S., 554, accords).

"2. It is hardly conceivable that one who was in fact the prior inventor of a device, on seeing it in use, and knowing that another claimed to be the inventor, would have uttered no protest, and laid no claim to the invention." (*Apply this to the Canadian patent*).

"4. The fact that a person, claiming to have invented a device in 1874 or 1875, knew that another had put it into public use in 1878, is sufficient to defeat his claims to take out a patent in 1883, even if he had been the inventor" (*Planing Machine Co. v. Keith*, 101 U. S., 479, accords).

Abandonment of an invention may be evinced by the conduct of the inventor at any time before or after the patent is granted.

"An abandonment of an invention to the public may be evinced by the *conduct* of the inventor *at any time*" before or after the patent is granted (*Planing Machine Co. v. Keith*, 101 U. S., 479; *Elizabeth v. Pavement Co.*, 97 U. S., 126, 134; *Bell v. Daniels*, 1 Bond, 212, 219; *Ransom v. Mayor*, 1 Fischer, 253, 273; *Holmes Electric P. Co. v. Met. B. A. Co.*, 30 Fed., 254). *Abandonment once made cannot be recalled* (same cases; and *Planing Machine Co. v. Keith*, 101 U. S., 479; *Western Electric Co. v. Sperry Co.*, 58 Fed., 186, 191).

"Abandonment is a question of fact and may be established by the patentee's intention to abandon or by inferences consistent therewith (*Rifle and Cartridge Co. v. Arms Co.*, 118 U. S., 22; *Planing Machine Co. v. Keith*, 101 U. S., 479)." So said Judge Hazel in the prior suit (T., p. 72).

POINT TWELVE.

Defendant's machines do not infringe claims 5 and 35 of the patent in suit when those claims are properly construed in view of the prior art disclosed.

Assignment of errors 14, 15, 28 and 29, which read as follows:

14. In not holding that claims 5 and 35 of the patent in suit, No. 534,543, should be limited to Berliner's *improvements in the details of construction of his reproducer*.

15. In not holding that defendant's devices do not infringe claims 5 and 35 of the patent in suit, No. 534,543.

28. In not holding that *in view of the prior art*, claim 5 should be limited to a method of reproducing sounds wherein the stylus is vibrated substantially as described in the specification of the patent in suit, No. 534,543, *and shown in figures 6 and 7 thereof*.

29. In not holding that *in view of the prior art*, claim 35 of the patent in suit, No. 534,543, should be limited to a sound reproducing apparatus having a reproducing stylus free to be vibrated substantially as described in the specification *and shown in figures 6 and 7 thereof*.

As fully explained under the preceding points of this brief, and especially under Point Five, dealing with the Suess Canadian patent, defendant's machines are constructed according to the gramophone of the Suess Canadian patent. As pointed out (T., p. 287, fols. 861-862; p. 296, fol. 886), de-

fendant has never made, sold or used machines provided with reproducers such as the reproducer of the patent in suit, shown in figures 6 and 7. That the reproducers used in connection with defendant's machines are like the reproducer of the gramophone of the Suess Canadian patent and are not like the reproducer of the patent in suit is obvious furthermore from a mere inspection and comparison. Since claims 5 and 35 must either be limited so as to cover a method or apparatus employing the reproducer of the patent in suit, shown in figures 6 and 7, or otherwise be held invalid, in view of the Suess Canadian patent, of Edison's English patent No. 1644 of 1878, of the Bell & Tainter patents of 1886, and the other evidence referred to above in this brief, it follows that defendant's machines do not infringe either claim 5 or claim 35 of the patent in suit.

The question is:

Whether where a person, as the assignee of another, first applies in a foreign country for a patent for an invention, and upon such application secures in the foreign country a patent broadly describing and claiming the invention, as the invention of another, such person can, after the filing of such application in the foreign country, file an application and secure a patent in this country for the same invention as his own invention. In other words, under such circumstances, can the claims of the home patent be construed to cover the invention described and claimed in the prior foreign patent?

This question arises upon the evidence showing that on May 5, 1891, Berliner, as the assignee of Werner Suess, filed an application in Canada upon which, on February 11, 1893, Letters Patent of Canada, No. 41,901, were granted (T., p. 169, fol.

507). The Canadian patent is set forth in the record at pages 155-168. By stipulation (T., p. 541) the drawings of the Canadian patent are identical with the drawings (T., p. 446) of U. S. Patent No. 427,279, of May 6, 1890, to Berliner as the assignee of said Suess. The file wrapper and contents, including the assignment, petition, powers of attorney and proceedings in the Patent Office, of the Canadian patent, are to be found in the record at pages 169-175. The petition (T., p. 170) was signed by Berliner, who asserted therein that Werner Suess had "invented new and useful improvements in gramophones, not known or used by others before his invention thereof," and that Berliner, by an assignment, "acquired the right of obtaining a patent from Werner Suess aforesaid for the said invention," and "prays that a patent may be granted to him as the assignee of the said Werner Suess for the said invention."

That the Canadian patent describes and broadly claims the invention covered by the claims, 5 and 35, of the patent in suit, here in controversy is clear. Referring to the opinion of Judge Townsend, it appears that Judge Townsend found that the Canadian patent "discloses and broadly claims the invention covered by the claims here in suit" (T., p. 324, fol. 971) and that "the Canadian patent in terms describes and claims the broad, *generic* invention of Berliner covered by the claims here in suit" (T., p. 325, fol. 973). With this finding of Judge Townsend the Circuit Court of Appeals agreed, as will be seen from the oral statement of that court made when affirming upon the argument Judge Townsend's decree. The Circuit

Court of Appeals said (petition for writ of *certiorari*, p. 42, fol. 126);—

> "Of course, if the Canadian patent expired the United States patent expired at the same time."

In view of this Canadian patent which was not in evidence in the prior suit, this petitioner contends that the construction given to the claims 5 and 35 in the prior suit was incorrect, not warranted by the specification of the patent in suit, and unreasonable by reason of the fact that in the Canadian patent Berliner, as the assignee of Suess, had previously described and *claimed the broad invention* which in the prior suit, in the absence of the Canadian patent, the courts had construed the claims 5 and 35, in controversy, to cover.

As both the Circuit Court and the Circuit Court of Appeals have squarely held that the Canadian patent describes and broadly claims the invention of the claims 5 and 35, here in suit, as construed by the courts in the prior suit and in this suit, but little needs to be said further upon this point. It is desired only to point out that in *Matheson* v. *Campbell*, 78 Fed., 910, 917, the Circuit Court of Appeals for the Second Circuit said:

> "It must be *sound law*, as it is reasonable *common sense* to hold that the *tests of prime importance* in a suit for infringement are those which the *patent itself* prescribes. The inventor certainly may be assumed to know what it is that he has invented. If any one is able to describe the product of his inventive skill, it is himself. He surely knows the earmarks of the thing he seeks to patent. * * *"

Referring to the patent in suit, it will be seen

that Berliner describes all the features of his invention at page 456, lines 17-36, as follows:

> "*One feature* of my invention has reference to *improvements* in the *method of recording sound* by tracing upon a fatty film deposited upon a metallic surface, undulatory lines, corresponding to sound waves, and then etching such lines in the metal base, or, as it is now commonly called, the record tablet; while the *other features* of my invention have reference to the *construction of the details of both the recorder and the reproducer of the gramophone*. Each of these *features of improvement* are designed to overcome certain difficulties, and to avoid certain imperfections *heretofore met with in the operation of the gramophone*. These difficulties and imperfections, and the manner in which they are avoided, will be particularly pointed out in the following description with reference to the accompanying drawings, in which—"

This is the patentee's express declaration of the features of improvements contained in the patent, and no other declaration whatever of any other feature of improvements is to be found elsewhere in the patent. In the face of this express and positive declaration of the patentee as to what are the features of his invention, the Circuit Court and the Circuit Court of Appeals have held not only that the patent included other features not enumerated by Berliner, but have gone even further and held that the features which Berliner did enumerate as the features of his invention are not the principal features of his invention; and finally the Circuit Court and the Circuit Court of Appeals reached the unreasonable and the untenable conclusion that the claims, 5 and 35, here in controversy, were not to be limited in any way by the features which Ber-

liner in the specification pointed out as the principal features of his invention, but were to be broadly construed so as to cover the invention which Berliner had previously described and broadly claimed in the Canadian patent as the invention of Suess.

It is, therefore, respectfully submitted that the broad construction given to claims 5 and 35 in the prior suit and in this suit is a construction which renders claims 5 and 35 invalid, because anticipated by Suess in the Canadian patent, as well as by Edison and by Bell & Tainter; that such broad construction of claims 5 and 35 is, upon the facts stated, unreasonable and untenable; and that claims 5 and 35, when properly and reasonably construed, in view of the Canadian patent and of the express statement of Berliner in the patent in suit as to the features of his invention, *must be limited, by Berliner's improvements in the construction of his reproducer.*

In his lecture before the Franklin Institute Berliner said (T., p. 266):

> "I will now describe the *most important* apparatus of the *gramophone*—the *recorder*."

Equally important with the recorder, is, of course the reproducer, which, as Berliner stated in the Franklin Institute lecture (T., p. 268),

> "is constructed on precisely the same principles as the recorder."

The recorder and the reproducer constitute, therefore, as Berliner says, the principal features of the invention of the patent in suit. *A proper construction of claims 5 and 35 must include the features of construction of the reproducer*, whereby the reproducer is permitted to vibrate laterally in

the manner described in the specification of the patent. In other words claims 5 and 35, when properly construed, are infringed only by a sound-reproducing apparatus employing a stylus carried by *"a leaf spring twisted at one point so as to bring the edge of one portion at right angles to the face of the other portion, whereby it is elastic in two directions"* (see claim 25, T., p. 462), *and can vibrate laterally.* This was Berliner's *improvement* upon the laterally-vibrating stylus of the prior art (see expired U. S. patent No. 372,786 of Nov. 8, 1887, Fig. 2, T. pp. 416 and 526).

Petitioner used the reproducer of the Suess gramophone of the Canadian patent, which reproducer has none of the features of the invention of the patent in suit. Petitioner's machines embody the invention of Suess, only, and unless claims 5 and 35 can be construed so as to cover broadly the invention of the Canadian patent, they cannot be construed so as to cover petitioner's machines.

As this defense was not met by the opinion of Judge Townsend in the Circuit Court, as it was not met by the oral statement in the Circuit Court of Appeals, and as it is clearly conclusive in reason, this Court is respectfully requested carefully to consider the argument made in support thereof, and to pass upon the question whether it is possible to hold that claims 5 and 35 can reasonably and properly be construed so as to cover an invention which the patentee, Berliner, had previously asserted in the most solemn and irrevocable manner, in the Canadian patent, was the invention of Suess; and, if it is possible so to hold, whether claims 5 and 35 are not invalid, because before filing his application for the patent in suit Berliner asserted in the Canadian patent that the invention thereof was

the invention of Suess, and thereby became *estopped* from thereafter claiming the invention as his own.

It is not reasonable to hold that what Berliner claimed in Canada as the invention of Suess, he subsequently claimed in the United States, by the claims in suit, as his own invention. Claims 5 and 35 must, therefore, be limited, and, when limited, they are not infringed by defendant.

The same patent solicitor, acting for Berliner, made the application for the Berliner-Suess Canadian patent and the application for the patent in suit (T., pp. 171, 452). It is not reasonable to hold that he first claimed the invention for Suess in Canada and then claimed the same invention for Berliner in the United States.

Berliner's Canadian patent No. 55,079 (T., pp. 314-317), identical with the patent in suit, was applied for and issued after the issue of the Berliner-Suess Canadian patent; hence, the Canadian patent office, as well as Berliner, considered that claims 5 and 35 did not cover the broad invention of the earlier Berliner-Suess Canadian patent, but were limited as above stated.

POINT THIRTEEN.

The matter of the patent in suit was concededly the subject of more than one prior, foreign patent. Hence under Rev. St. Section 4887, the patent in suit expired at the same time with the foreign patent having the shortest term.

It was shown under Point Six (*supra*, p. 131), that even before the decision of this court in *Siemens' Adm'r* v. *Sellers*, 123 U. S., 276, the Pat-

ent Office held in *ex parte Unsworth*, 15 O. G., 882, as follows;—

> "Where the entire matter is the subject of *more than one foreign patent* the restriction should be made in view of *the one having the shortest term*."

The Patent Office was referring to a case where the matter of the home patent had been split up to form the subject matter of several prior, foreign patents obtained in the same foreign country. It must be immaterial, however, whether the several prior, foreign patents covering the several features of the home patent were obtained in one or in more than one foreign country.

Concededly, the subject matter of the alleged invention of claims 5 and 35 of the patent in suit was previously patented by Berliner in Canada (see Point Nine, *supra*, p. 188).

Concededly, the reproducer described and claimed in the patent in suit was previously patented by Berliner in Germany (see Point Six, *supra*, p. 144).

Concededly, the reproducer and also the recorder described and claimed in the patent in suit were previously patented by Berliner in France (see Point Seven, *supra*, p. 152).

Clearly, the main features of the invention of the patent in suit were previously patented by Berliner by the British, French and German patents of November 8, 1887 (see Point Eight, *supra*, p. 164).

Hence, the entire matter of the patent in suit was previously patented by Berliner in several foreign countries. Therefore, according to the express provision of Rev. St. § 4887, (quoted *supra*, p. 128), since more than one prior, foreign patent was ob-

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tained for the subject matter of the invention of the patent in suit, the patent in suit was limited to expire, and did expire, with the prior, foreign patent "*having the shortest term.*" It cannot be contended that some of the claims of the patent in suit expired with one prior, foreign patent, some with a second, some with a third, and the rest with others. According to the statute, the patent in suit expired with that prior, foreign patent which had the shortest term. The patent in suit, therefore, expired with the Canadian patent of Point Nine, or with the German patent of Point Six, or with the French patent of Point Seven, or with the British, French and German patents of Point Eight. It is immaterial which. In any case it expired under the clear provision of the statute.

Unless the court, contrary to the repeated decisions of this Court (*supra*, pp. 132-135), is to read into the statute provisions and exceptions not therein contained, and is to depart from the clear and unambiguous words of the statute, which are applicable to the precise facts in the suit at bar, and is to base its decision, as did the Courts below, upon some *supposed* policy of Congress, not stated in the statute, then the patent in suit expired.

POINT FOURTEEN.

For the reasons stated in the preceding points of this brief, the bill was without equity, and, the patent having expired, the Circuit Court was without jurisdiction to entertain this suit in equity. The Circuit Court, therefore, erred in not dismissing the bill.

Assignment of error 23 (*supra*, p. 12), sets forth that the Circuit Court erred in not dismissing the bill of complaint. The other relevant assignments of error have been referred to in the preceding points of this brief.

It appearing that the patent in suit had expired before this suit *in equity* was begun, the Circuit Court, under repeated decisions, had *no jurisdiction* to entertain the suit and should have *dismissed the bill* (*Root* v. *Railway Co.*, 105 U. S., 189; *Diamond Co.* v. *Sens*, 159 Fed. 497; *Brown* v. *Lanyon*, 148 Fed. 838, 842; *Plotts* v. *Central Co.*, 143 Fed. 901; *Deere Co.* v. *Dowagiac Co.*, 153 Fed. 177, 180.

It appearing also that the claims in suit are void because they are claims for the functions of a machine, that claim 35 in suit is void because it claims nothing, that the claims in suit are void because of anticipation, of more than two years prior, public use and of abandonment, and that the patent and claims in suit are not infringed, the bill was *without equity* and should have been *dismissed* upon the hearing of the application for the injunction *pendente lite* (*Harriman* v. *Northern Securities Co.*, 197 U. S., 244, 286; *Castner* v. *Coffman*, 178 U. S. 168; *Mast, Foos & Co.* v. *Stover Mfg. Co.* 177 U. S., 485 and 89 Fed. 333, 337; *De Laval Co.* v. *Vermont*

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It appearing also that the patent in suit had expired not only before the suit was begun, but also before the application for the injunction *pendente lite* (Point Seven), the Circuit Court erred in entering the decree for injunction.

CONCLUSION.

The decree of the Circuit Court for an injunction and the order of affirmance of the Circuit Court of Appeals should be reversed with costs and the cause remanded to the Circuit Court with a direction to dismiss the bill.

Respectfully submitted,

LOUIS HICKS,

Counsel for petitioner.

Office Supreme Court, U.S.
FILED.
JAN 13 1909
JAMES H. McKENNEY,
CLERK.

No. 80. October Term, 1908.

IN THE

United States Supreme Court.

LEEDS & CATLIN COMPANY,

Petitioner-Defendant,

v.

VICTOR TALKING MACHINE COMPANY and UNITED STATES GRAMOPHONE COMPANY,

Respondents-Complainants.

Brief on Behalf of Respondents-Complainants.

INJUNCTION PROCEEDINGS.

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THE END.

FOREWORD.

Since this brief was printed, and about to be filed, complainant's counsel received a copy of the Petitioner-Defendant's brief forwarded by the Clerk of the Court. It is noted that the Petitioner-Defendant has not observed the same chronological order in numbering its Points as obtained in its petition on *certiorari*, and it therefore becomes necessary to change in red ink the number of the Points printed herein, as complainant's counsel in the preparation of this brief had followed the numerical order of the Points followed by the Petitioner-Defendant in its petition for *certiorari*. The Points of argument considered by the defendant, however, in its present brief are substantially the same as those heretofore urged by it, though the same order of presentation was not observed.

Counsel for Petitioner-Defendant premises his brief with a statement outlining his defences and referring to Mr. Berliner's domestic and foreign patents, in answer to which the attention of the Court is called to the statement contained in complainant's brief, pages 1 to 24; in relation to the history of Mr. Berliner's invention the attention of the Court is called to complainant's brief, pages 19 to 24. and 60 to 78

Re Defendant's Point One:

This point is considered in complainant's brief at Pages 245 to 265.

Re Defendant's Point Two:

This point is considered in complainant's brief at Page 265.

Re Defendant's Point Three:

This point is considered in complainant's brief at Pages 213 to 218.

Re Defendant's Point Four:

This point is considered in complainant's brief at Pages 218 to 244.

Re Defendant's Point Five:

This point while not noted as a separate point in complainant's brief, is considered at Pages 68, 69, 74, 77, 82, 163, 180, 183, 184, 185, 186 and 188.

Re Defendant's Points Six and Seven:

These points are considered in complainant's brief at Pages 83 to 125.

Re Defendant's Point Eight:

This point is considered in complainant's brief at Pages 125 to 146.

Re Defendant's Point Nine:

This point is considered in complainant's brief at Pages 192 to 213.

Re Defendant's Point Ten:

This point is considered in complainant's brief at Pages 146 to 178.

Re Defendant's Point Eleven:

This point is considered at Pages 178 to 192.

Re Defendant's Point Twelve:

This point is considered at Pages 73 to 78.

Re Defendant's Point Thirteen:

This point is considered in complainant's brief at Pages 83 to 125; Pages 125 to 146, and Pages 192 to 213.

Re Defendant's Point Fourteen:

This point is a general point of alleged want of equity, briefly considered in complainant's brief, Pages 297 to 299.

IN THE

Supreme Court of the United States.

October Term, 1908. No. 80.

Suit on Berliner U. S. Patent, No. 534,543.

LEEDS & CATLIN COMPANY,
Petitioner-Defendant,

v.

VICTOR TALKING MACHINE COMPANY AND UNITED STATES GRAMOPHONE COMPANY,
Respondents-Complainants.

BRIEF ON BEHALF OF RESPONDENTS-COMPLAINANTS.

INJUNCTION PROCEEDINGS.

STATEMENT OF THE CASE.

This case comes before this Honorable Court upon writ of *certiorari*, granted May 27, 1907, upon Petition of the petitioner-defendant, filed May 13, 1907, the said *certiorari* being directed to the United States Circuit Court of Appeals for the Second Circuit, which Court, by decree filed October 22, 1906 (Transcript of Record, p. 546, fol. 1638), affirmed the decree of the United States Circuit Court, for the Southern District of New York, of May 2, 1906, granting preliminary in-

junction in accordance with the prayer of the Bill of Complaint, filed by the complainants to restrain the defendant from infringing their Letters Patent, No. 534,543, as to claims 5 and 35, issued to Emile Berliner, February 19, 1895, for Improvement in Gramophone.

Before proceeding further with the statement of the case, it will be here noted that there were two similar suits, in equity, brought at the same time for infringement of said patent, one against the Leeds & Catlin Co., the petitioner-defendant herein, and the other against the Talk-O-Phone Company, a corporation organized and existing under the laws of the State of Ohio, having an office in New York City, N. Y., both of which suits were prosecuted together, substantially the same testimony being in each case, each of the defendants being represented by the same counsel, and both cases heard together in the U. S. Circuit Court, for the Southern District of New York, and on appeal in the U. S. Circuit Court of Appeals, for the Second Circuit. As shown by the record in this case, each of the said defendants, the Talk-O-Phone Co. and the Leeds & Catlin Co. sold talking machines and sound records similar to the complainants' patented machines and records, and for the purpose of these motions for preliminary injunction, this fact was admitted by the defendant's counsel in each case.

The Talk-O-Phone Co., the defendant in the other, or sister suit, was principally a manufacturer of talking machines, and the Leeds & Catlin Co., the present Petitioner-Defendant, was principally a manufacturer of sound records to be used in connection with said machines, though, as before stated, this defendant sold said machines as well. While the affidavit of E. F. Leeds (R., p. 312), denies that any business connection existed between the Leeds & Catlin Co. and the

Talk-O-Phone Co. at the date of his affidavit, April 13, 1906, yet it is apparent from his affidavit that a short time prior to suit brought, the Leeds & Catlin Co. sold records to the Talk-O-Phone Co. for its machines, and also that the Leeds & Catlin Co. purchased some Talk-O-Phone machines from it. Mr. Leeds also admits (R., p. 313, fol. 938), that he was elected President of the Talk-O-Phone Co., but shortly after resigned. The affidavits of Albert L. Irish (R., pp. 309-311, and R., pp. 283-289), while denying any then present connection between the Talk-O-Phone Co. and the Leeds & Catlin Co. at the date of the affidavit, shows that there were business relations between the two companies relative to the manufacture and sale of the infringing machines and records respectively. It will also be noted that all these affidavits in the record of this case against the Leeds & Catlin Co. are entitled as well in the Talk-O-Phone case.

These facts were more fully set forth in the affidavit of R. L. Thomae, in behalf of complainants, in the Talk-O-Phone case, but as that case was not appealed Mr. Thomae's affidavit was not brought before this Court.

These explanations are necessary in order that this Honorable Court may understand why the affidavits in this case are entitled in both cases, and why the Talk-O-Phone Co. is so conspicuously and frequently referred to in the said affidavits. The Talk-O-Phone Co., however, did not file any petition for *certiorari* to this Court, notwithstanding the injunction decree similar to the injunction decree against the Leeds & Catlin Co. was entered against it at the same time as against the Leeds & Catlin Co., apparently being satisfied that the decree of the Circuit Court of Appeals could not be reversed.

Further, since the writ of *certiorari* has been granted in this case, a final decree by consent was en-

tered by the U. S. Circuit Court, for the Southern District of New York, against the said Talk-O-Phone Company, May 4, 1908, and writ of final injunction issued upon the said consent decree May 6, 1908.

The Leeds & Catlin Co., however, continued to prosecute this said appeal, with the affidavits entitled in both cases incorporated in the Transcript of Record.

RE CONTEMPT PROCEEDINGS.

The appeal in the **contempt** proceedings against Leeds & Catlin Co. is considered in a separate brief (Case No. 81, of October Term, 1908), the Petition for *certiorari* having been granted also in that branch of this suit against the said Leeds & Catlin Co. for infringement of this patent here in suit, No. 534,543.

Judge Lacombe in the Circuit Court, found this defendant in **contempt of court** for violating the writ of preliminary injunction entered in this suit, and imposed a fine of $1000.00, one-half to the United States, and one-half to the complainants (see decision of Judge Lacombe, Contempt R. p. 74), the decree of Judge Lacombe upon writ of error to the U. S. Circuit Court of Appeals for the Second Circuit was duly affirmed in an opinion of Judge Hough, Judge Coxe concurring—Judge Wallace dissenting (Contempt R., p. 90, etc.).

The defendant's contempt consisted after the service of the writ of preliminary injunction, in continuing to manufacture and sell disc talking machine records, identically the same as the defendant had theretofore made and sold, the said records being intended for the same uses and purposes, viz.: for use in the combination of claim 35, in accordance with the method of claim 5, of the Berliner Patent, No. 534,543, in suit, for reproducing sound from said records. It was shown in these contempt proceedings that defendant

sold the said contempt records to enable owners of the sound reproducers purchased from complainant, or its licensees, to reproduce sound recorded on the said records, instead of records made by the complainants. Both the Circuit Court and the Circuit Court of Appeals held that the continued manufacture and sale by the defendant of the contempt records clearly established contributory infringement, as the said records were an essential element of the combination of claim 35, and were made and sold by the defendant to be used with the other element of the combination of that claim, viz., with a reproducing stylus shaped for engagement with the said record and so mounted as to be free to be vibrated and propelled by the record, and in accordance with the method of claim 5.

The collection of the fine was suspended pending the writ of error upon proper security being entered. The writ of injunction was also stayed pending appeal, security in the sum of $10,000 being required to be entered (See Contempt R., pp. 76-77). The amount of this security manifestly contemplated only the usual appeal period to the U. S. Circuit Court of Appeals, and manifestly did not contemplate the much longer period of appeal to the Supreme Court of the United States, which was a matter of grace and not of right, so that the defendant has been enabled to continue the said infringement since March 11, 1907, the date of the said Order in the contempt proceedings, and is, and has been continuing to sell the said records for the same purpose in contributory infringement in large quantities since the said date, as well as previously thereto, with very insufficient security to these complainants should the decrees of the Court below be affirmed by this Honorable Court. The previous bond required by Judge Townsend, at the time of the original injunction in the Circuit Court, May 2, 1906 (Injunction R., p. 330), was not more than sufficient, if

sufficient, to cover the infringement pending the appeal from the decree of the Circuit Court, in the injunction proceedings to the date of the decision of the Circuit Court of Appeals, of October 12, 1906.

As complainants' counsel has not seen or had any opportunity to examine defendant's brief to be filed in this Honorable Court, no reference herein can be made by pages to defendant's brief. It is assumed, however, that substantially the same points of defense raised by the defendant in its Petition for *certiorari* will be followed, and also substantially the same points of defense as presented in the Court below, we will, therefore, herein refer, from time to time, to the defendant's points, defenses and statements as contained in the said petition for *certiorari,* and as contained in defendant's brief in the Court below, a copy of which is attached to defendant's petition for *certiorari,* it being understood that this Honorable Court in consideration of these matters will have before it, not only defendant's brief on appeal prepared specially for this hearing, but also the said petition for *certiorari,* with defendant's brief below attached thereto.

An index of subjects treated has been carefully prepared so that this Honorable Court may readily find any particular subject treated, especially in view of the somewhat extended length of this brief, rendered necessary in order to meet the numerous subjects and alleged defenses which the defendant has heretofore presented in the courts below, and others, which it is assumed the defendant's counsel may treat of in his brief, and attempt to have this Court consider, many of which, as hereinafter pointed out, we submit should not come before this Court for review, for the reasons hereinafter pointed out. In the event that this Honorable Court should consider all the various de-

fenses which may be raised by the defendant, it has been decreed expedient, in order that the complainants' position may be fully presented before this Court on all points, to treat herein all possible points which the defendant might attempt to raise in its untiring effort to defeat the claims of the patent in suit in order that the defendant, and others, who are anxiously watching the outcome of this decision, may continue the manufacture and sale of the complainants' patented talking machines and records.

The Widely Known Victor Talking Machine.

The Berliner Patent, No. 534,543, here in suit (R., p. 452), is the main basic foundation patent upon which the Victor Talking Machine and records of world-wide reputation and fame are constructed, under claims 5 and 35, and has been several times sustained by the U. S. Circuit Court and the U. S. Circuit Court of Appeals, for the Second Circuit, as hereinafter particularly noted.

Claims 5 and 35, of the patent in suit, read as follows:

> "5. The method of reproducing sounds from a record of the same which consists in vibrating a stylus and propelling the same along the record by and in accordance with the said record, substantially as described.
>
> "35. In a sound reproducing apparatus consisting of a traveling tablet having a sound record formed thereon and a reproducing stylus shaped for engagement with said record and free to be vibrated and propelled by the same, substantially as described."

While the petitioner-defendant will doubtless urge upon this Court numerous alleged defences which have been heretofore fully and thoroughly considered and

passed upon by the U. S. Circuit Court and U. S. Circuit Court of Appeals favorably to the patent relative to the question of alleged anticipation, and alleged prior public use, etc., yet the main defence upon which this petitioner-defendant relied in the petition for *certiorari,* and in the Circuit Court and in the United States Circuit Court of Appeals, was the effect of certain prior foreign patents granted to the said Berliner, the patentee of the patent in suit, prior to the issue of the United States patent, in suit. As to these defences, both the Circuit Court and the Circuit Court of Appeals in these cases, held that the invention of claims 5 and 35, of the Berliner Patent, in suit, had not been patented in any foreign patent prior to the date of the patent in suit, and did not come under that portion of Section 4887, of the Revised Statutes, affecting the term of the U. S. patent.

Re Doctrine laid down in Siemens v. Sellers.

The petitioner-defendant's petition for the writ of *certiorari* was mainly based upon, the contention that the doctrine laid down by this Honorable Court in the case of Siemens *v.* Sellers, 123 U. S. 276, applied to this case. The Court of Appeals, for the Second Circuit, as well as the U. S. Circuit Court, held that the doctrine laid down in that case did not apply to the facts of the present case. The petitioner-defendant's main contention in this present case at this time is, in substance, that if Mr. Berliner, the patentee of the patent in suit, patented abroad, prior to the issue of the United States patent, any feature, or element described or claimed in any of the claims of the said United States patent, no matter if the same were for minor and unimportant constructions, and not the **broad, principal invention** of claims five and thirty-five here in suit, that the United States patent would

expire as to all of its claims with the expiration of the foreign patent having the shortest term to run, notwithstanding the fact that the broad invention, claimed in claims five and thirty-five of the patent in suit, and other features of invention claimed in other portions of the patent in suit, were not described, or claimed, or patented in the said prior foreign patent, or patents.

This Honorable Court doubtless took cognizance of this present case by granting the petition for *certiorari* in order to settle any question, as to any such misinterpretation or misconstruction of the doctrine laid down by this Honorable Court in the said case of Siemens *v.* Sellers, 123 U. S., p. 276.

As hereinbefore noted, the petitioner-defendant will doubtless also raise, as defences, various alleged anticipations and questions of alleged prior public use, which defences were not technically before the Circuit Court or Court of Appeals in this present cause, and which defences those courts refused to consider, and which we submit should not be subject here to review. If this Court should find that the *discretion* exercised by the Court below in granting the motion for preliminary injunction was not improvidently exercised, or that the discretion was not abused, the decree of the Court below should stand, as hereinafter more fully considered. We feel confident that this Honorable Court will coincide and agree with the findings and rulings of the U. S. Circuit Court of Appeals for the Second Circuit, as well as the U. S. Circuit Court of that Circuit in the said matters.

Re Record in American Graphophone Case.

It is respectfully submitted, and strenuously urged, on behalf of complainants, that while the record in the American Graphophone case was before the Cir-

cuit Court, and Circuit Court of Appeals, in this case, and should be referred to at this hearing in order that an intelligible understanding may be had of the history of the invention, and of the litigation upon this patent, and of the defences made in the Graphophone case, as hereinafter stated, yet, it is respectfully submitted that the defences in the Graphophone case should not be re-considered or reviewed by this Honorable Court in this appeal, as the Court of Appeals in this case, as well as the Circuit Court, did not consider any of the said defenses made in the American Graphophone case. They were regarded as *res adjudicata*. As these defenses in the American Graphophone case were not considered or reviewed as defences by the Court of Appeals in the present case those defenses should not be reviewed by this Honorable Court upon appeal in this case.

The only matter, the subject of review by this Honorable Court, it is submitted is the defence which was considered and was before the Circuit Court of Appeals in this case.

In this connection, the attention of this Honorable Court is called to the decision of Judge Townsend, in this case, in the Circuit Court (R. pp. 318-327). Attention is also called to the affirmance of the Court of Appeals of the decree entered pursuant to Judge Townsend's decision, and to the oral decision of the Circuit Court of Appeals, affirming the decree of Judge Townsend, which is printed on pages 41-46 of defendant's petition for writ of *certiorari*. It will be here observed that in the decision of Judge Townsend, he stated (R. p. 318, fol. 953):

> "The Circuit Court for the Southern District of New York, in the suit of this complainant against the American Graphophone Company, after an exhaustive discussion of the issues pre-

> sented sustained said claims and its decree was affirmed by the Court of Appeals, of March 1st, 1906, after elaborate argument by able counsel and upon voluminous briefs in which apparently every material defence was presented and discussed."

Judge Townsend then proceeded (R. p. 319, fol. 955), to consider the "twelve defenses claimed either to consist of new matter not before the Court on the former hearing, or to relate to matters which, while in the record at the former hearing were not considered or discussed." The Court then considers the alleged new matter. As to the alleged new defenses regarding the Edison British Patent, No. 1644, of 1878, before the Court, in the Graphophone case, Judge Townsend said:

> "The defenses founded on the prior Edison Patent will not be discussed because said patent was before the Court in the original suit (the Graphophone suit). (R. p. 327, fol. 979.)

Regarding the alleged new defense as to certain contract between the parties, Judge Townsend said that this was "not deserving of notice," and that "the contract and the relations of the parties were fully before the Court and the record and briefs in the said case are a sufficient answer to any such contention" (referring to the Graphophone case), (R. p. 327, fol. 979).

The oral decision of the Circuit Court of Appeals affirming Judge Townsend in the present case, printed at pages 41 to 46, of defendant's petition for *certiorari*, shows that the only defenses considered at all were the alleged *new* defenses as to the effect of Berliner's prior foreign patents upon the term of the patent in suit.

The only defenses, therefore, which this Court

should review in this case are the alleged *new defenses* raised by the defendant in this case, and such as were not before the Court in the American Graphophone case.

In this connection we would cite a few authorities to the effect that questions not passed upon by the lower Court, cannot be reviewed in this Court.

Bell *v.* Bruen, 42 U. S. 169;
Alveso *v.* U. S., 75 U. S. 337;
First National Bank Kentucky, 76 U. S. 355;
Rogers *v.* Ritter, 79 U. S. 317;
Wilson *v.* McNamee, 102 U. S. 572;
Wood *v.* Wiemar, 104 U. S. 786;
Topliff *v.* Topliff, 145 U. S. 156;
Carr *v.* Fife, 156 U. S. 494;
U. S. *v.* American Bell Telephone Co., 167 U. S. 224.

While we will hereinafter refer to the said American Graphophone Co. record, as is necessary in order that this Honorable Court may have an intelligent understanding of the defenses in that case, which were considered *res adjudicata,* and which the Court of Appeals in this case, as well as the Court below refused to consider, it is referred to herein **without in any way waiving the said objections** to a review in this case of the defenses in the American Graphophone case, and **without in any manner waiving the point heretofore made.**

Further as to questions of fact upon which both of the lower courts concurred the findings will not be disturbed unless clearly wrong. Continental Paper Bag Co. *v.* Eastern Paper Bag Co., 210 U. S., 405.

The Record in This Case.

It will be noted that the motion for preliminary injunction in this case, as also in the Talk-O-Phone case, was filed March 24, 1906, a rule to show cause having been granted that day returnable April 6, 1906.

This motion for preliminary injunction was, therefore, **promptly and diligently** made immediately following the decision of the U. S. Circuit Court of Appeals, for the Second Circuit, in the suit of these complainants against the American Graphophone Co. on sustaining this same Berliner Patent, No. 534,543, here in suit as to the claims five and thirty-five, now in controversy.

The motion for preliminary injunction in this present case was made before Judge Townsend (R. p. 318), who was one of the Judges composing the Circuit Court of Appeals, for the Second Circuit, which decided the appeal in the said suit against the American Graphophone Co. (R. p. 373). Judge Townsend was not only thoroughly familiar with the record, and all the defences raised in the said suit against the American Graphophone Co., but it was agreed between counsel for the respective parties in this case, both at the hearing of the motion for preliminary injunction of this case before Judge Townsend, and upon the argument of the appeal in the U. S. Circuit Court of Appeals, that the appeal Transcript of Record in the said suit against the American Graphophone Co., should be referred to at the said hearings of this case. This is apparent, from the complainant's and defendant's affidavits, such as Hicks' affidavit (R., p. 78 and 89, etc.), and Hicks' affidavit No. 2 (R., pp. 218-219), and defendant's affidavit of Goss (R., p. 298, etc.), as well as by complainant's affidavits—(see Kennedy affidavit, R., pp. 55-61, and Middleton's affidavit, p. 51), that this record in the American Graphophone case should be before your

Honors as it was before the Court below, in order to intelligently consider the record in this case, and particularly the affidavits referred to not as evidence in this case to be here reviewed, **but to show what the defences were in that case**, and which the courts in the present case refused to consider as before the Court below. The decision of Judge Hazel in the Graphophone case in the Circuit Court, and the decision of the U. S. Circuit Court of Appeals affirming Judge Hazel (see R. p. 63 and R. p. 373), show that the courts below in this case referred to the Graphophone Record to show what defences had been considered in that case which defences would not be considered as defences in this present case.

The attention of the Court is called, among other things in this connection, to the fact that Mr. Hicks, defendant's counsel, in his affidavit at R. pp. 77-80, refers to this Transcript of Record in the American Graphophone case, and to matter therein contained, and states, among other things (R. p. 80, fol. 240):

> "I beg leave to refer to the Exhibits filed in the said suit between the Victor Company, *et al.* and the American Graphophone Company * * *"

It is also clear from the affidavit of Mr. Harry T. Goss (R., pp. 297-303), that he had the record in the American Graphophone case before him, and that his criticism of it could not be intelligently considered by this Honorable Court without the same advantage of the presence of that record.

Mr. Hicks also in his affidavit of June 8, 1905, (R. pp. 216-220), criticises a certain agreement in evidence in the Graphophone case, and the *bona fide* prosecution of that case, and it is, we submit, incumbent that the record of that case should be before the Court, as it was used as an exhibit before the Circuit Court, and

Circuit Court of Appeals in the hearings of this case before, in order that the Court may fairly and intelligently review the decision of the lower Courts.

In this connection the attention of this Honorable Court is called to the opening paragraph of Judge Townsend's opinion in this Leeds & Catlin case (R. p. 318), where he states:

> "The bills allege infringement of claims 5 and 35 of the Berliner Patent, No. 534,543. The Circuit Court for the Southern District of New York in the suit of this complainant against the American Graphophone Company, after an exhaustive discussion of the issues presented sustained said claims and its decree was affirmed by the Court of Appeals on March 1st, 1906, after elaborate argument by able counsel and upon voluminous briefs in which apparently every material defence was presented and discussed.
>
> "The case on this motion is presented by some five hundred pages of affidavits and briefs; 'Defendants' Exhibit Letters Patent' is a book of some 135 pages.
>
> "It appears that the machines of these defendants are practically identical with those found to infringe in the former suit. These defendants, however, have set up twelve defences claimed either to consist of new matter not before the Court on the former hearing, or to relate to matters which, while in the record at the former hearing were not considered or discussed."

It is, therefore respectfully submitted that this Court should have that record, as had the Circuit Court and Circuit Court of Appeals, in considering the motion for preliminary injunction, and in reviewing their decisions.

The complainants in the Courts below consequently only argued the alleged new defences not presented in the American Graphophone case, such as noted by

Judge Townsend in the opening paragraphs of his opinion in this case above quoted in his decision granting the preliminary injunction—(see R., p. 318). There was no necessity to meet any of the defences which were not defences in this case.

A copy of the said Transcript of Record in the U. S. Circuit Court of Appeals in the suit of these complainants against the American Graphophone Co. will be presented to this Court at the hearing, for the purposes noted, in considering this appeal.

The petitioner-defendant will hereinafter be referred to as the defendant and the respondents-complainants will hereinafter be referred to as the complainants.

We will now consider the facts relative to the issue, in detail.

This case comes before this Honorable Court upon appeal from decree granting preliminary injunction for alleged infringement of claims five and thirty-five of Letters Patent No. 534,543, issued February 19, 1895, to Emile Berliner, for Improvements in the Method of and Apparatus for Recording and Reproducing Sounds. These claims five and thirty-five of the Berliner patent No. 534,543, in suit, were adjudicated by the U. S. Court of Appeals, for the Second Circuit, in a decision rendered March 1, 1906, affirming the decision of the Circuit Court filed by Judge Hazel, September 28, 1905, in the case of these complainants against the American Graphophone Company, in Equity, No. 8627 (140 Fed. Rep., p. 860). This latter case was hotly contested, and the defendant put in evidence all the material prior art. A copy of the decision of said Court of Appeals, and of the decision of Judge Hazel, in that case is printed in the record (Transcript of Record, pp. 63 to 74). (140 Fed. Rep., p. 860, and 145 Fed. Rep., p. 350). A petition for rehearing and leave to amend decree was

filed by the defendant, the American Graphophone Company, in said Court of Appeals in April, 1906, after the motion for preliminary injunction in the present case had been argued, but before decision rendered. The petition for rehearing was based upon the alleged new evidence produced in these cases, which petition and leave to amend was refused by said Honorable Court. (See 145 Fed. Rep., p. 351.)

On account of the complainants' showing regarding the financial conditions of the Leeds & Catlin Co. and of the Talk-O-Phone Co., Judge Townsend, in staying the writ pending appeal, required each of the defendants to enter a bond of $10,000 to indemnify the complainants for damages and profits accruing during the period of the stay (Transcript of Record, p. 330), and in the Talk-O-Phone case the amount of the bond was subsequently increased to $25,000.

As the defendants in the Court of Appeals have filed a very voluminous brief, covering some 200 pages of printed matter; though many of the points raised by the defendants should require little or no consideration, yet it has been deemed proper to explain to this Honorable Court all the defendants' points, whether trivial, or apparently immaterial, so that there may be no misunderstanding, in the event that this Honorable Court should see fit to consider any of defendant's points which we consider should not be here reviewed as matters within the *discretion* of the Court below, etc. This has, therefore, rendered it necessary to make this brief much fuller than otherwise would have been the case, contrary to the desire of counsel for respondents.

In view of the defendant's unwarranted attack upon Mr. Berliner, and the well recognized fact of his having been the inventor of the gramophone or "Victor" talking machine in suit, there is also herein in-

cluded a brief statement of the history of Mr. Berliner's invention in this art, as shown by the record, dating back to November, 1887, and, in fact, back to the date of his application for his first patent No. 372,786, for his earliest device, filed May 4, 1887, though the invention in suit practically dates from the early part of November, 1887. A brief resume of the relation of Berliner's invention in suit to the prior phonograph and graphophone is also considered, together with a careful review of the patent in suit, so that the Court may have these facts quite fully before it, especially in view of the strenuous effort of defendants' counsel to becloud and minimize the importance of the invention in suit.

The Complainants' Exhibits, Defendant's Machines and Records Admitted.

For the purposes of these motions, the defendant admits the sale of machines and records offered by the complainants, and marked in each case as exhibits, Complainants' Exhibit, Defendant's Machine and Defendant's Record.

Infringement Not Denied.

The defendant does not deny the infringement, (unless a different construction should be given to the claims from that heretofore given to them by the various Courts which have passed upon them). The machines and records of the defendant produced as exhibits are identical, from a patent standpoint, with the defendants' machines and records in the suit against the American Graphophone Company, as shown by the affidavit of H. C. Kennedy on behalf of the complainants (R., p. 59, Fol. 177, and R., p. 61, Fol. 181).

THE MATTER IN SUIT.

The subject matter of the claims of the patent involved in this suit is the method and apparatus of *reproducing* sound, after a record of the same has been made, and involves a consideration of one of the most marvelous classes of inventions of the latter part of the nineteenth century. The subject is not an intricate, or difficult one, but necessarily requires the careful consideration of the nice and most delicate operations of the method based upon scientific principles, carried out through the medium of scientifically invented and constructed devices. It involves the consideration of the phenomena of sound reproducing through the medium of these methods and devices, which makes it possible to reproduce at will the human voice, grand opera, orchestrations, and, in fact, any, and all, sound uttered, almost perfectly, with the tones and notes of the original utterances. In comparing the sound reproducing devices and methods of this art, the differences in the methods followed, and in the construction and organization of the devices employed, as the one set of methods and apparatus advanced beyond the other, in the steps of progress and in perfection in the art, until the Berliner invention in suit, must be fully understood, and appreciated, in order to arrive at an intelligent and correct judgment.

The Victor Talking Machine Company, as shown by the record, is the exclusive licensee of the said patented invention, under license from the United States Gramophone Company. The title to the patent in suit is admitted, and not disputed.

The subject matter of the present suit is the talking machine, widely known as the "*Gramophone,*" invented by Emile Berliner about November, 1887, which is distinguished from the two other types of talking machines, in existence prior to the Berliner invention, and

known as the "*Phonograph,*" being the Edison machine, and the "*Graphophone,*" invented by Messrs. Bell & Tainter.

The Art Prior to Berliner's Invention Briefly Reviewed.

At the date of Mr. Berliner's invention of the gramophone, about November 7, 1887, as before stated, the only other *commercial* talking machines known were the Edison Phonograph, and the Bell & Tainter Graphophone, the latter being owned by the American Graphophone Company. (See R., p. 74—carrying Berliner's date back to the filing date of Berliner patent No. 564,586 (R., p. 466) before this Court in reviewing the decisions which were based in part upon that record.

The Edison phonograph, which had been invented, as long ago as 1877 or 1878 (see Edison patent, R. p. 335), comprised essentially an *indented sound record* formed on the periphery of a cylinder, or tablet, of wax-like material—sometimes covered with tin foil, in the earlier machines—the indented record extending in spiral, or helical, form on the face of the cylinder, or tablet. In the earlier Edison patents, such as Edison British patent of 1878, No. 1644 (Record, p. 472, etc.), this indented record is shown as formed on the surface of both a disc and a cylinder, though the Edison commercial machines used only cylinders for their records, such as shown, for instance, in the Edison United States patents, No. 227,679 (R. 346), and No. 200,521 (R. p. 334). The character of the indenting sound groove of the Edison phonograph was such as to require, in the reproducing machine, a construction whereby the stylus, or reproducing point, in order to be maintained in constant rubbing contact with the rotating record groove, should be *positively propelled* across the face of the record cylinder, or tablet, by special *mechanical auxiliary means,* such as a *positive feed*

screw, or auxiliary means provided for positively traveling, longitudinally, the record tablet past the stylus point of the reproducer, when it was held in a fixed position. (See decision of Judge Hazel in American Graphophone case, R. bottom of pp. 65-66, etc.).

The Bell & Tainter Graphophone (R. p. 387), existing at the date of the Berliner invention of the patent in suit, comprised essentially a cylinder, or disc, of soft wax-like material, having a record groove of *varying depth,* in the nature of *hills and valleys, cut* in the soft wax-like material, as contradistinguished from being *indented* by an indenting point, such as in the Edison phonograph. The character of the graphophone record groove, in which many of the apices of the vertical undulations, or hills, were practically on a level with the upper surface of the tablet, was such as to necessarily require positive mechanical means in the reproducing machines for keeping the stylus point, as it rubbed over the vertical undulations, or over the hills and valleys, in constant rubbing connection, and proper relation with the record groove. This was so as to positively feed the reproducing stylus point across the face of the cylinder, or tablet, as it revolved, and on the spiral record groove wound its way, and thus to keep the stylus point always in the groove and on the record proper. The Bell & Tainter Graphophone is shown in "Defendant's Exhibit, Bell & Tainter Patent, No. 341,214" (R. p. 387). In the illustration, the record tablet on which the vertically undulating sound grooves are cut in spiral form is a revolving disc, as shown particularly in Figs. 1, 2, 12 and 14 of the Bell & Tainter patent, in which case the record tablet, instead of the stylus point, is constructed and arranged to travel, while the stylus point holds a relatively fixed position, the record tablet at the same time rotating upon its axis. (See Judge Hazel's decision R., p. 66, etc.)

Another form of the graphophone which more

nearly resembles the commercial Graphophone, which has the vertically undulating record formed upon a wax-like cylinder, is shown in "Defendant's Exhibit, Tainter Patent, No. 341,288." (R. p. 399.)

The commercial form of the Edison Phonograph having an indented record provided upon a cylinder of wax-like material, is illustrated in "Edison Patent No. 227,679" (Rec., p. 346) and "Edison Patent No. 200,-521" (Rec., p. 334).

The Edison phonograph for reproducing sound from an indented **tin foil** record, and the Bell & Tainter graphophone for reproducing sound from a cut wax record of varying depth, cut or engraved in wax-like material, having the vertical undulations therein, represented the prior art at the time Mr. Berliner entered the field in 1887.

While the Edison phonograph, and the Bell & Tainter graphophone, had distinctive features of difference, yet they more nearly resembled each other than they did the Berliner gramophone, which made its advent in 1887. The Edison phonograph, and the Bell & Tainter graphophone were both constructed to reproduce sound from a record of *uneven* depth, vertically undulating, the Bell & Tainter record being a clean *cut* or *engraved* wax record, while the Edison was formed by a series of *indentations*. Both machines were closely allied to each other, the main line of demarkation and improvement by Bell & Tainter over Edison being the vertically undulating groove *cut* or *engraved* in wax-like material by a graver or tool which removed the material from the groove as it cut it, in the form of a shaving, which superseded the *indented* record of Edison.

From the character of the record grooves of both Edison and Bell & Tainter, it was an essential requisite that the reproducing machine should have a **positive**

auxiliary feeding mechanism for traveling the record tablet past the stylus point, or an auxiliary positive feed mechanism for traveling the stylus point over the face of the record tablet as it simultaneously rotated.

In both the Edison and Bell & Tainter machines, the stylus point rested upon the vertically undulating record, or indented record, in the base of the groove, which was of microscopic depth, and carried the weight of the sound box, of which it was a part, as shown in the Bell & Tainter patent, and the Edison patents, just referred to. This, of course, produced a *constant normal pressure upon the centre of the diaphragm* of the sound box, dependent upon the weight of it. The rotating of the vertically undulating record groove beneath the stylus point *vibrated the stylus up and down,* in accordance with the record thereon, which stylus, in turn, pulsated the diaphragm, and set the air in motion behind it, reproducing the recorded sound. The side walls of this class of groove, both in the Edison and in the Bell & Tainter constructions, were naturally unabrupt and poorly defined. At the apex of the vertical undulations, many of which were about on a level with the surface of the tablet, there would, of course, be practically no side wall. In the base, or valley, between the undulations or hills, the extent of the side wall would be varied according to the depth of sound waves recorded. The side walls were also always *sloping,* both in the Edison *indented* form and in the Bell & Tainter *cut* form. It is, therefore, clear that in a practical commercial machine for reproducing from a record of this construction, reproducing stylus must be operatively maintained in connection with record walls *by positive auxiliary means* for either traveling the spiral record past the stylus point, or traveling the stylus point over the face of the spiral record, as it rotated in reproducing sound.

It will be further noted that while the Edison and Bell & Tainter commercial records were all in soft wax-like material, prior to Berliner invention, Mr. Berliner's commercial records were all formed in hard, durable and practically indestructible material.

We do not say that it would be impossible to propel a light stylus point carrying comparatively little weight by a cut vertical wax record of the Bell & Tainter type across the face of the record, as in a toy machine of the Amet construction shown in "Amet Patent, No. 562,-699," in the other suit, which is later than the Berliner invention. We do say, however, that it is impracticable by it to get acoustical results, and further, *it never was done before Berliner's invention.*

THE PATENT IN SUIT.

The patent in suit, No. 534,543, issued February 19, 1895, to Emile Berliner, is contained on page 452 of the Record in this case.

The claims in these suits, which were the claims sustained in the suit against the American Graphophone Company, are claims five and thirty-five, and read as follows:

> "5. A method of reproducing sounds from a record of the same, which consists in vibrating a stylus and propelling the same along the record by and in accordance with the said record, substantially as described."

> "35. In a sound reproducing apparatus consisting of a traveling tablet, having a sound record formed thereon and a reproducing stylus shaped for engagement with said record and free to be vibrated and propelled by the same, substantially as described."

As shown the invention of claims five and thirty-five of Patent 534,543 in suit was invented by Mr. Berliner as early as November, 1887, though the present application for patent was not filed until March 30, 1892. (See *Per Curiam* of the U. S. Circuit Court of Appeals in Graphophone case, 145 Fed. Rep., 350, and attached to this brief.)

The patent in suit, No. 534,543, is for a *gramophone,* and, as stated in the specification, "has reference to improvements in the method of and apparatus for recording and reproducing sounds——"

A large portion of the specification of this patent is devoted to a description of one of Mr. Berliner's methods of recording sound by tracing, upon a fatty film, deposited upon a metallic surface, undulatory lines corresponding to sound waves, and then etching such lines in the metal base, which constitutes the record tablet. He also illustrates in the drawings and fully describes, a recording machine for making the talking machine records in the manner described.

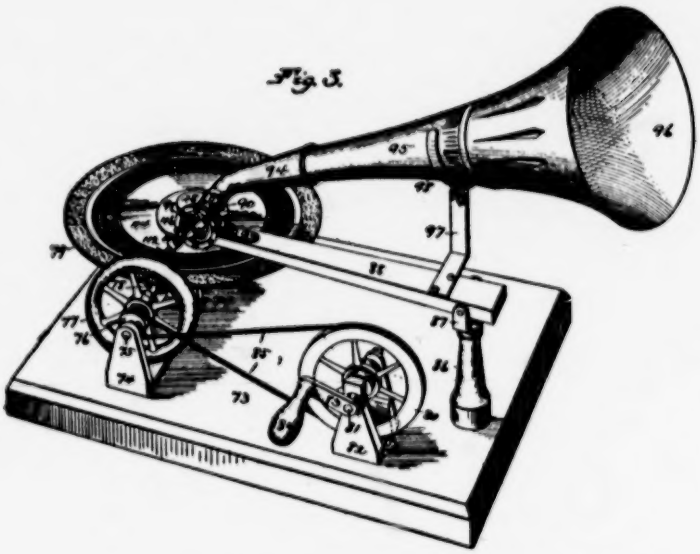
In Fig. 3 of the patent one form of a reproducing machine is illustrated, such as is claimed in claim thirty-five, and operating in accordance with claim five, the details of which are fully described in the specification (specification, p. 4, line 95, to p. 5, line 19).

While no other form of this reproducing apparatus is specifically described in the patent, it is clear that the patentee did not limit himself to that particular form shown in Fig. 3, but merely illustrates it and describes it manifestly as one of the numerous forms which might be used. This is apparent not only from the breadth and scope of claims five and thirty-five, but also from the general description in the specification of the said method and reproducing apparatus. Another, and earlier, construction of machine invented by Mr. Berliner in accordance with these claims is illustrated on

page 31 of this brief, being Fig. 10 of Berliner patent 564,586 (R., p. 465).

It is clear that this reproducing apparatus must have a traveling tablet, with a sound record formed thereon, and a reproducing stylus shaped for engagement with the said record, and free to be vibrated and propelled by the same, it is not essential what means for rotating the tablet is employed; it may be a hand motor, such as shown in Fig. 3, or be operated, by a weight properly governed, as illustrated in the form shown on page ~~27~~ 31 of this brief, which is the construction illustrated and described in Berliner's patent application filed November 7, 1887, which was still pending when the application for the patent in suit was filed; or, very much more preferably, a spring motor might be employed, such as is now used in the commercial machines of the complainants and of the defendant, and shown in "Complainants' Exhibit, Complainants' Machine," and "Complainants' Exhibit, Defendant's Machine." Nor is it essential what gear connecting mechanism is used for traveling the tablet, whether it be a friction gear, such as shown in Fig. 3, or whether it be a train of spur gearing, such as used in the complainants' and defendant's spring motor. *It is also clear that it is not essential as to just how the reproducing stylus shall be suspended, or mounted above the record tablet, the only essential features in this regard being that it shall be so suspended, or mounted, that the stylus point shall at all times be in engagement with the record, and free to be propelled by the record across the face of the tablet as the point is simultaneously being vibrated by the record grooves.*

The specification, p. 4, lines 95 to 127, describes the construction of the particular form of apparatus shown in Fig. 3, as follows:



"The reproducing apparatus as a whole is represented in Fig. 3.

"Upon a base board 73 in standards 74 is journaled a shaft 75, upon which are mounted a driven pulley, 76, a fly wheel, 77, and a friction disc, 78. The latter is in frictional engagement with a rotary tablet, 79, which is mounted upon a vertical shaft substantially in the manner described with reference to the rotary table, 4, of the recording apparatus. Fig. 3 being a perspective view, the mounting of the table, 79, is not visible, but is easily understood from the foregoing description. The upper surface of the table is preferably covered with a sheet of felt or other elastic and non-resonant material, as indicated by appropriate shading.

"Upon the felt-covered table, 79, the record tablet, 44, is placed, and is clamped thereon substantially in the manner in which this is done in the transmitting apparatus, i. e., by means of a clamping plate, 46, and a thumb-nut, 48. A driving wheel, 80, mounted on a shaft, 81, which is journaled in standards, 82, is rotated by means of a crank, 83,

and handle, 84, and gives motion to the tablet, 79, by means of a cross belt or cord, 85. The relation of the table, 79, to the friction disc, 78, is the same as the relation of the table, 4, to the friction disc, 12; that is to say, the table rests with the greater part of its weight upon the friction disc, so that the frictional gearing is automatically maintained."

The patent then describes one particular form of mounting for the sound-box and stylus, as shown in Fig. 3, which in that case consists of a post, 86, mounted upon a baseboard, 73, which has swivelled upon its upper end a fork, 87, between the prongs of which is pivoted the swinging arm, 88, which extends over the tablet, 79, and has at its free end a clasp, 89, which receives the neck, 90, and which projects from the centre on one side of the casing of the reproducing diaphragm, 92. It is then shown how this casing, with its diaphragm, stylus and appurtenances, can be turned in the clasp, and be fixed in any adjusted position by the clamp screw, 93, all of which is detail. The specification then also states that upon the neck, 90, which projects beyond the clasp, 89, is slipped a flexible tube, which in turn receives the small end of a sound-conveying trumpet, 95, the flaring end, 96, of which is turned toward the listener. The specification then describes how the horn may be supported upon the swinging arm, 88, through the medium of a bracket, 97. It also shows that the construction is such that the point of the reproducing stylus will press rather firmly upon the record tablet, for the purpose of keeping it in engagement, to prevent displacement.

This form of swinging arm is, as before stated, one of several forms which might be used for carrying out the method claimed in claim five, and for a reproducer such as claimed in claim thirty-five, though it is obvious that the invention is not limited to the particular de-

tails of construction shown in this form illustrated in Fig. 3.

It is also seen that the *particular specific construction of swinging arm* is nowhere claimed in this patent.

Berliner's invention was broader than this. This form, however, was constructed in accordance with his broad invention, and embodied it, and illustrated the form in which he used his invention at the time of the filing of the application for the patent in suit. He could have added another form, such as shown in Fig. 10 of his application of 1887, then pending, and perhaps other forms, but it was not necessary.

The specification then goes on to state (p. 5, lines 19 to 33) as follows:

> "It will now be understood that when a record tablet, having a record of sound waves upon its surface, produced in accordance with my invention, is mounted upon the table, 79, and when the point of the stylus is adjusted in engagement with the record groove, and the wheel, 80, is rotated, the rotating record groove will guide the stylus across the face of the tablet, and will at the same time vibrate the stylus and diaphragm in accordance with the undulations of the record grooves. The sound waves thus produced by the diaphragm will issue from the flaring opening of the trumpet, and the sounds will be heard by a listener in front of the trumpet, or in its vicinity."

The patentee here evidently refers to the use of a *laterally undulating record groove of even depth* in hard resisting material, when he says "a record tablet, having a record of sound waves upon its surface, produced in accordance with my invention."

The patentee then describes the details of construction of the sound box, diaphragm and stylus, and he again refers to his method, and shows that the stylus point need not be in contact with the bottom of the groove, in fact preferably should not be, and is guided

by the walls of the record groove. He states (specification, p. 5, lines 81 to 89):

> "In the operation of reproducing the sound recorded on a tablet, the stylus is guided by the walls of the record groove, and not by the bottom of the same. Consequently, it is not essential that the point of the stylus be in contact with the bottom of the groove. In fact, it is preferably not in contact with the same, so that this point may be made rather dull."

The claims then follow, after a brief description of a device for damping, or modifying, the sound.

Many of the claims relate to the method of recording the sound waves on a plate to be etched, and the method of etching the same. A number of them refer to the construction of the sound-box and its connection with the stylus. Some of them claim the recording apparatus, and some of them certain details of construction.

There is no claim for the *specific form* of swinging arm reproducer shown in Fig. 3.

Claim thirty-five, however, is drafted so as to include not only the construction shown in Fig. 3 of reproducing apparatus, but other constructions which embody a traveling tablet having a sound record formed thereon, and a reproducing stylus shaped for engagement with the record, and free to be vibrated and propelled by the same.

As this was the invention of Mr. Berliner broadly, there was no necessity for a multiplicity of specific claims. The language of this claim clearly illustrates the breadth and scope of Mr. Berliner's reproducing apparatus, as does claim five of the scope of his method, which the apparatus claimed in claim thirty-five was devised to carry out.

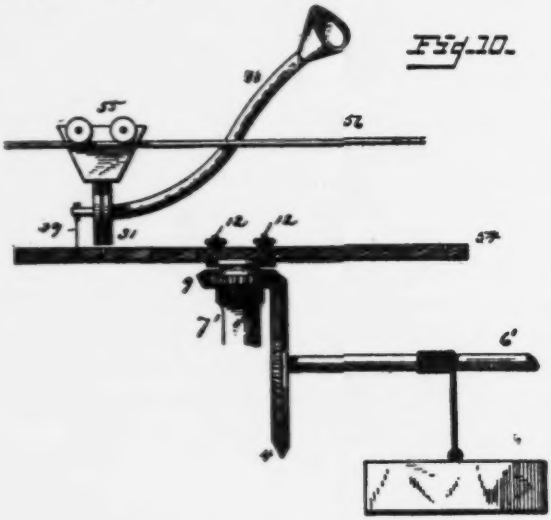
Claims five and thirty-five read as follows:

> "5. The method of reproducing sounds from a

record of the same, which consists in vibrating a stylus and propelling the same along the record by and in accordance with the said record, substantially as described."

"35. In a sound reproducing apparatus, consisting of a traveling tablet having a sound record formed thereon, and a reproducing stylus shaped for engagement with the said record, and free to be vibrated and propelled by the same, substantially as described."

One of the forms of apparatus constructed and operated by Mr. Berliner, in 1887, in accordance with claims thirty-five and five, is illustrated in this accompanying drawing.



The decision of the Circuit Court in the Graphophone case, affirmed by the Court of Appeals, and Mr. Berliner's testimony now in this case (Rec., p. 239) show that this is one of the forms of the apparatus invented by him, and claimed in claim thirty-five, which he constructed in November, 1887, and which he re-

ferred to in the article, "Berliner's Gramophone," published in the "Electrical World" of November 12, 1887, and in his Franklin Institute lecture.

The decision of the Court of Appeals has sustained these claims of his patent after a careful consideration of the full and most carefully prepared defence of the defendant in the suit against the American Graphophone Company, and has fixed Mr. Berliner's date of invention as November, 1887.

Re Pending Application for Berliner Patent, No. 564,586.

At the date of the filing of the application for the patent in suit, No. 534,543, which was March 30, 1892, Mr. Berliner had pending in the Patent Office, at Washington, D. C., another application, which had been filed November 8, 1887, and resulted in Letters Patent No. 564,586 (R. p. 465), which was not issued until January 28, 1896, after the date of the issue of the patent in suit, No. 534,543, which was February 19, 1895. This first application, filed November 8, 1887, had illustrated in one of the figures of the drawings (Fig. 10) and disclosed and described in a portion of the specification, though not claimed, the invention subsequently claimed in the patent in suit, filed March 30, 1892. In this connection the Court of Appeals in the Graphophone case (R., p. 74) stated:

> "The specifications in that application (for 564,586) were full enough to warrant the making of the claims here in controversy (5 and 35). At any time the application might have been amended by adding such claims, and in our opinion it is immaterial that, instead of thus amending it, he took the broader claims on another application filed while the first was pending. The second may fairly be considered a continuation of the first, and thus Berliner's application antedates the public use, and

the facts will not sustain the contention that he abandoned his invention here in suit. The decree is affirmed." (145 Fed. Rep., p. 350.)

Consideration of Claims 5 and 35 and Infringement Involved by Complainants' Expert.

The invention claimed is described briefly by complainants' expert, Harry Cobb Kennedy (R. p. 56, etc.).

"The patent in suit is for a gramophone or talking machine, that is to say, a machine for reproducing recorded sounds. The sounds to be reproduced are recorded in a flat disc sound record by means of spiral grooves of even depth containing lateral undulations conforming to the sound waves produced by the sounds to be recorded. This flat disc sound record is carried by a turn-table rotated by means of a suitable motor. To reproduce the sounds, a sound box or reproducing apparatus is employed. A swinging arm, suitably supported at one end, carries this sound box at its other end, the said sound box communicating with a suitable amplifying horn carried also by said swinging arm. The sound box contains a diaphragm which is set in vibration by a stylus suitably connected therewith, which stylus enters the record groove and is laterally vibrated thereby. These lateral vibrations being reproduced in the diaphragm which sets up vibrations within the sound box and amplifying horn similar to those recorded on the flat disc sound records, and also similar to the sound waves by which the record groove was made in the flat disc sound record.

"Claims five and thirty-five of the patent in suit read, as follows:

> '5. The method of reproducing sounds from a record of the same which consists in vibrating a stylus and propelling the same along the record by and in accordance with the said record, substantially as described.'

> '35. In a sound reproducing apparatus consisting of a traveling tablet having a sound record formed thereon and a reproducing stylus shaped for engagement with said record and free to be vibrated and propelled by the same, substantially as described.'

"The United States Circuit Court of Appeals, in affirming the decree of the Court below in the *per curiam* filed March 9, 1906, stated as follows:

> 'In affirming this decree we do not find it necessary to add anything to the careful and exhaustive discussion of the issues which will be found in Judge Hazel's opinion, with one single exception.'

"This single exception is, that without discussing the question raised in the Court below disposing of the defence of prior public use, and without expressing any definite opinion either way as to the manner in which it was decided by the Court below, the Court of Appeals held that on another ground, namely that of continuing applications, this defence of prior public use would not avail the defendant, so that the manner in which claims five and thirty-five were construed by the Court below thereby becomes the opinion of the Court of Appeals.

"Prior to the invention of the patent in suit the reproducing styles of sound reproducing machines was fed across the surface of the round record by a feed screw, or other means independent of the record itself, and the main distinction of the invention of the patent in suit over the prior art is in the manner of the propelling of the stylus across the record, which is not accomplished by an auxiliary feed screw, but is due to the operating engagement of the stylus point with the record groove itself, independently of other means, or as Judge Hazel states in his opinion sustaining the validity and holding infringement of claims five and thirty-five:

'Complainants contend, and the proofs show, that the stylus attached to the diaphragm is arranged so as to permit the same to vibrate laterally, and that owing to lateral undulations in the walls of the record groove, a desirable swaying motion is imparted to the reproducer diaphragm. Concededly, the lateral undulations in the record automatically guide or propel the stylus and diaphragm in its course over the disc from the outer circumference toward the center, and the stylus travels in an apparently direct radial path while at the same instant of time it is pulsated or incited by the sound waves. The principle of operation in the Berliner machine is thought to be essentially different from that of the machine of Bell & Tainter. In the latter, an auxiliary joint or feed screw was necessary, as already stated, to effectuate the required passage of the record over the point of the stylus, or to cause the stylus and reproducer diaphragm to travel across the surface of the record. In complainants' patent, on the other hand, it is shown that the lateral vibrations of the stylus point and the propelling of the same over the surface of the record without mechanical assistance and through the means of the groove alone was the primary object of the inventor.' * * * 'But from what has already been said regarding the Bell & Tainter patent, it is manifest that the principle of Berliner's invention rests upon the practicability of propelling the stylus in the groove across the surface of the record without a feed screw or other mechanism. By such adaptation to what is known in the art as a zig-zag record (complainants' record) certain imperfections in the talking machines were overcome, and sound, when reproduced was rendered intelligible. There was, I think, patentable novelty in the method which accomplished the results stated.' * * * 'The essence of such claims would seem to include a sound record which, when in juxtaposition with a diaphragm and stylus propelled in the manner described, is thereby enabled to successfully accomplish the primal object and purpose of the invention.'

"In the said suit against the American Graphophone Company so decided by the Court of Appeals as aforesaid, I have examined the exhibits of complainants' and defendant's machine and records, and am conversant with the same, and except for certain specific details of structure, non-essential changes of material and very slight changes in ornamentation or style, Complainants' Exhibits, Defendant's Machine, is a practical duplicate of Complainants' Exhibit, Complainants' Machine as manufactured under the patent in suit. And the structure embodied in Complainants' Exhibit, Defendant's Sound Record, as compared with Complainants' Exhibit, Complainants' Sound Record is also the same, flat disc sound records made of hard, indestructible material, in the faces of which are impressed a spiral record groove of even depth with lateral undulations, which record groove serve the two-fold purpose of vibrating the stylus to produce the necessary vibrations in the diaphragm of the sound box, and also to automatically propel the stylus in the groove across the surface of the record without a feed screw or other mechanism independent of the record itself.

"I have also examined the exhibits introduced in this cause against the Talk-O-Phone Company, namely, Complainants' Exhibit, Complainants' Machine; Complainants' Exhibit, Complainants' Sound Record; Complainants' Exhibit, Defendant's Machine, and Complainants' Exhibit, Defendant's Sound Record, and I find that Complainant's Exhibits, Complainants' Machine and Sound Record are the same as the said Complainants' Exhibits, Complainants' Machine and Sound Record introduced in evidence in said suit against the American Graphophone Company so decided by the Court of Appeals. Comparing the exhibits in this present suit, I find that Complainants' Exhibits, Defendant's Machine is essentially the same as Complainants' Exhibit, Complainants' Machine introduced in evidence in

this suit, and also is the same as Complainants' Exhibit, Defendant's Machine, introduced in evidence in said suit, against the American Gramophone Company. That is to say, in all of these exhibits, there is a cabinet or casing containing a spring motor, the upright spindle of which projects centrally through the top of the cabinet and carries a turn-table. From one side of the cabinet there is a projecting arm. In a bearing at the outer end of this arm is mounted a swinging arm capable of swinging horizontally and vertically on a universal joint, while the inner and free end of this swinging arm carries the sound box, with which is connected an amplifying horn supported and carried also by said swinging arm. Complainants' Exhibit, Defendant's Sound Record is the same structurally as Complainants' Exhibit, Complainants' Sound Record, offered in evidence in this suit, and likewise the same as the Complainants' and Defendant's Sound Record before the Court in said suit, against the American Graphophone Company so decided by the Circuit Court of Appeals, that is to say, it is a flat disc sound record of hard material having in its face a spiral record groove of even depth with the lateral undulations. This Defendant's Sound Record in the present suit is adapted, as in the other devices, to be carried and rotated by the turntable, and the stylus of the sound box engaging the spiral groove therein causes lateral vibrations in the diaphragm and these vibrations of the diaphragm set up the sound waves in the sound box and amplifying horn while at the same time the sound box and stylus are automatically propelled across the surface of the record by reason of the record groove itself, and independently of any other means or mechanism.

"As there is absolutely no difference between the construction of defendant's machine and sound record and the invention set forth and claimed in claims five and thirty-five of the patent in suit, as far as the prin-

ciple of Berliner's invention as to vibrating the diaphragm and propelling the stylus and the sound reproducer by and in accordance with the groove of the sound record across the surface of the record, and without a feed screw or other mechanism, and in view of the fact that defendant's machine and sound record offered in evidence in this suit do vibrate the stylus and propel it and the sound reproducer across the surface of the record in the patent in suit, and as it is done in Complainants' Exhibits, Complainants' Machine and Complainants' Sound Record in said suit against the American Graphophone Company, so decided by the Court of Appeals, in my opinion, the said Complainants' Exhibit, Defendant's Machine and Sound Record, in this suit contain all the means and instrumentalities called for by claims five and thirty-five of the patent in suit and constitute an infringement of these claims.

"The Complainants' Exhibit, Defendant's Machine and Defendant's Sound Record are manufactured for use in connection with each other, and are so used, and in my opinion are incapable of use in any other connection in a practical manner."

The Commercial Uses of the Invention.

For the information of the Court, we would state briefly that a sound reproducing machine, otherwise known as a talking machine, is constructed to reproduce sound, such as songs, musical renditions, recitations, etc., from sound records, upon which the songs, recitations, etc., have previously been recorded. The commercial machines of the Edison phonograph, and the Bell & Tainter graphophone, were usually constructed so as to operate both as recording and reproducing machines, as their records were made upon wax-like blanks, usually of the cylindrical form. In this type of machine, the purchaser could at home, or in his office,

talk into the machine, or sing to it, or dictate letters, the cutting, or indenting, stylus recording the sound as it was uttered by the operator upon the wax-like cylinders. Having made a record he could then, on the same machine, *reproduce* the sound recorded at once by returning the reproducer over the record grooves thus made. Or, in the phonograph and graphophone, records already prepared, with songs thereon by opera singers, or recitations by dramatic talent, were sold, so that they could be reproduced at home for amusement purposes.

Mr. Berliner's invention could not be used for dictating purposes, or making records at home, or at the office, as the Berliner commercial machines sold upon the market were not recording machines, but strictly *reproducing machines*. The Berliner commercial records were always made in **hard, indestructible material** in disc-like form, and were produced in the laboratory through the medium of such process, as described in the patent in suit, or by other suitable means.

The Berliner records were for amusement and educational purposes, and made a radical departure from all talking machine records which had been on the market previous to his invention, which had been formed in wax-like material having a record of the vertically undulating type. Mr. Berliner's commercial disc records of the laterally undulating, or zig-zag type, of groove of even depth were always formed in hard rubber, or material of this character, into which the record could be pressed from a matrix, made in the laboratory, while the material was in a semi-plastic heated condition, and which hardened upon cooling.

All the commercial phonographs and graphophones placed upon the market were of the mandrel type; constructed to record, or reproduce from cylindrical records. All the commercial machines of the Berliner type had a revolving flat table, constructed to

reproduce from hard, indestructible disc records of the laterally undulating, zig-zag type.

All the commercial reproducing machines have what is commonly called a sound box, which consists of a diaphragm of mica, or other suitable material, mounted in a metal cup, or casing, to the centre of which diaphragm is attached a stylus point. In the graphophone and phonograph the stylus point is held by gravity against the vertically undulating record in the spiral record groove, which vertically undulating record pulsates the stylus point in the direction of its length as it is rotated. This, in turn, pulsates the diaphragm, in accordance with the sound waves of the record, which, in its turn, sets in motion the adjacent air within the sound box, thus reproducing the sound recorded upon the record, which is amplified by being discharged through a flaring horn. In the Berliner gramophone, in suit, the stylus bar, connected with the centre of the diaphragm, is vibrated laterally substantially at right angles to its length, and is positively moved back and forth by the lateral sound undulations recorded in both side walls of the record groove, which is of even depth.

A Most Delicate Instrument.

The vibrating of a needle point for reproducing sound from a record of sound waves, was a very delicate operation, and required the most delicate and nicely adjusted instrument to reproduce properly. The phonetic problem to be dealt with was one of minute and microscopic proportions, and not only could not the vertically undulating record of the Edison and Bell & Tainter type effectually automatically propel the stylus of the sound box across the face of the tablet, and produce satisfactory results, as it rotated, by reason of the peculiar character of the record, as herebe-

fore described, having practically little or no side wall resistance, but at that time **and prior to the advent of Mr. Berliner in the field, it had not been discovered that a vibrating stylus pulsated under the impulse of sound waves, could be automatically propelled by a record groove by contact with one of the side walls of the record groove, without destroying, or impairing, the sound vibrations of the stylus point. Mr. Berliner was the first to discover this fact and to invent a method and a machine and record of a new and peculiar character for accomplishing the result.**

The history of Mr. Berliner's invention of his sound records having the sound vibrations recorded laterally in the side walls of a groove of even depth (the subject-matter of another suit between the same parties hereto, on Berliner record patent, No. 548,623), and of his method and apparatus involved in claims five and thirty-five of the patent in suit, is quite fully set forth in Mr. Berliner's article in the "Electrical World" of November 12, 1887 (R., p. 243, etc.), and in Mr. Berliner's address before the Franklin Institute of May 16, 1888 (R., p. 245, etc.).

Berliner Gramophone in Suit Distinct Departure.

As will be seen from the evidence, Mr. Berliner's gramophone was a distinct departure from the method and apparatus of the Edison phonograph, and of the Bell & Tainter graphophone.

Defendant's expert witness in the Graphophone suit admitted Mr. Berliner to be one of the greatest experts in this art. (See Record in American Graphophone case, p. 80.)

In this connection attention is called to a statement made by Mr. Cameron, defendant's expert in the graphophone case, which statement is quoted in the record in the graphophone case, p. 80. Mr. Cameron states, referring to Mr. Berliner, that he——

"was the greatest expert at that time in the world in the art of making and duplicating 'zig-zag' record, or records of uniform depth."

Further Mr. Cameron states:

"These (the Berliner record and the vertically undulating record) were the only forms of commercially practicable sound records known at the date of the Berliner patent, as in fact they are the only forms of commercially practicable sound records known at the present day."

Mr. Cameron further states:

"As I have before pointed out, the record of even depth in commercial practical form, had its origin in inventions of Mr. Berliner, dating from the years 1887 and 1888."

A Brief History of the Invention in Suit.

Emile Berliner, the patentee of the patent in suit, whose name is also conspicuously connected with the Bell telephone by reason of his important inventions in connection therewith, had been a careful student of the sound reproducing art from the time that Edison's first phonograph was known, about 1876, and continued his experiments until the invention of the Berliner gramophone, now widely known to the world as such, involving conspicuously the method and devices for reproducing sound claimed in claims five and thirty-five of the patent in suit.

His patent No. 372,786, filed May 4, 1887, issued November 8, 1887, was the first to describe and claim the gramophone record of laterally undulating grooves of even depth in solid resisting material. He also here showed a somewhat crude reproducing apparatus with a fixed non-propellable reproducer.

On November 7, 1887, Emile Berliner filed an appli-

cation in the United States Patent Office for a method and apparatus of recording and reproducing sound, and in that application, among other things, described and illustrated the method and apparatus claimed in claims five and thirty-five of the patent in suit, No. 534,543, which was filed March 30, 1892, and issued March 19, 1895, while the application first referred to was still pending, and before it issued, which was not until July 28, 1896, when it was issued and given the No. 564,586. (R. p. 465).

Five days subsequent to the filing of the first-mentioned application of November 7, 1887, the "Electrical World," published in New York City, New York, in its issue of November 12, 1887 (R. p. 243), contained an article describing Mr. Berliner's gramophone, and his work in relation thereto. This publication also referred to the particular invention, the subject-matter of claims five and thirty-five of the patent in suit. See also Mr. Berliner's testimony regarding this publication and regarding his application filed November 7, 1887, when he was called as a witness on behalf of the defendant in the Graphophone case (R. p. 230, etc.). Also see Mr. Berliner's testimony when called as a witness by the complainants. (R. p. 239, etc.).

About six months after the filing, of the first mentioned application, which became eventually patent No. 564,586, and during the pendency of that application Mr. Berliner delivered a lecture at Franklin Institute, Philadelphia, before this scientific body, on May 16, 1888, in which he referred, among other things, to his reproducing method and apparatus which had been described and illustrated in his then pending application filed November 7, 1887. While during that lecture he was etching a record plate described in the lecture, he took the opportunity to experiment with his reproducing device before the audience in this hall to test its sound reproducing qualities before this scientific body

of some two hundred people, reproducing some phonautograms, or records, which he had previously prepared in Washington. He pointed out, however, to the audience that some imperfections may have existed at that time in his recording apparatus by reason of lost or added motion, as well as in his *reproducing* apparatus there presented and illustrated on Fig. 2 of the drawings accompanying his lecture. (See R. p. 267. Also see statement, middle of p. 267). Mr. Berliner also referred in this lecture to the description of his invention published in the "Electrical World" of November 12, 1887. He shows that in that paper he referred to "mounting the sounder on a carriage and rails, and have the record groove itself be the screw which was to guide the point of the stylus across the disc from periphery to centre."

In the application for patent filed November 7, 1887, he illustrated in Fig. 10 (R. p. 465), the apparatus of claim thirty-five of the patent in suit, No. 534,543, in a somewhat different form of construction from that illustrated in Fig. 3 of this patent in suit. This form is shown on page 31 of this brief. Instead of having the carrier, which supports the sound box and stylus mounted on a pivoted, swinging arm, as illustrated in Fig. 3 of the patent in suit, No. 534,543, he had the carrier suspended on a traverse rail over which it traveled, on two small anti-friction pulleys, as the stylus was vibrated and propelled by the record automatically across the record disc. This is described on page 4 of the specification of patent No. 564,586, lines 93 to 128. Otherwise the apparatus was exactly the same. The method in both applications was exactly the same.

In his Franklin Institute lecture of May 16, 1888, Mr. Berliner stated that this particular form of his invention had been improved upon by Mr. Werner Suess, who was with him there that evening on the occasion of his lecture, and who had *suggested* that the

sounder be mounted on a swinging arm pivoted at some distance from the disc. This swinging arm was merely another form of Mr. Berliner's devices shown in Fig. 10 of patent No. 564,586, and described in the specification which was then pending in the Patent Office. Mr. Berliner's testimony (R. p. 233-34, etc.), shows that Werner Suess is the same Werner Suess to whom Letters Patent of the United States No. 427,279, were subsequently issued May 6, 1890. This Suess patent No. 427,279, however, does not contain any broad claims, and was limited to the specific construction of the weighted or balanced arm, and to a lazy-tongs construction of pivoted arm. (Suess Patent, R. p. 446). This patent was assigned to Emile Berliner. Mr. Suess was in his employ at that time, and took out the patent for these detail features of construction at the request of Berliner. (See R. p. 234, etc.).

Attention is also called, in this connection, to Complainants' Exhibit Berliner Model, introduced at page 239 of the Record, illustrating the construction shown in Fig. 10 of the Patent No. 564,586.

It is, therefore, shown that Mr. Berliner not only invented the method of claim five, and the device of claim thirty-five, of the patent in suit, No. 534,543, as early as November 7, 1887, the date of the filing of his application for patent, No. 564,586, but also that at the date of the Franklin Institute lecture of May 16, 1888, he had an application pending in the United States Patent Office, which illustrated and described the device and method of claims thirty-five and five.

As has been decided by the U. S. Circuit Court of Appeals (R. p. 73), the fact that Berliner saw fit to file a second application (the patent in suit) on March 30, 1892, while the first mentioned application was pending, did not preclude him from putting into the second application (the application for the patent in suit) claims five and thirty-five, which could have been made in the

first mentioned case, had he desired to have them in that case. The first mentioned application was not issued until July 28, 1896, when it became patent No. 564,586, whereas the patent in suit, the result of the second application, No. 534,543, was issued February 19, 1895, about a year and five months before the first application was issued.

Claims five and thirty-five, of the patent in suit, are not in terms specifically limited to use in connection with a laterally undulating sound record of even depth, though the method and apparatus claimed in these two claims are particularly adapted to a record of this character.

Prior to this invention of Mr. Berliner, of November, 1887, no method existed for reproducing sound simultaneously vibrating and propelling the stylus point across face of the record through the medium of the record groove alone, and without the aid of any auxiliary feeding mechanism. The fact also remains that no talking machine apparatus existed prior to Mr. Berliner's invention of November, 1887, such as claimed in claim 35 applied to any class of record.

The Great Commercial Success of the Berliner Gramophone in Suit.

This invention of Mr. Berliner, who is also the inventor of an important improvement in connection with the Bell telephone, has been one of the greatest commercial successes of recent years. (See deposition of Charles K. Haddon, Graphophone Record, pp. 45-58.) The Victor Talking Machine Company, the exclusive licensee, and its predecessors in business, have built up a magnificent business, exclusively in the manufacture and sale of talking machines and records embodying the invention of Mr. Berliner, claimed in claims five and thirty-five, of the patent in suit, said

company in the manufacture of said inventions, having a factory in Camden, New Jersey, occupying approximately six acres of floor space, the business involving an investment of about four millions of dollars. (See Haddon deposition, Graphophone Record, pp. 47-48, Q's 14 to 16.)

The Victor Talking Machine Company purchased the business of the Berliner Gramophone Company, the former licensee of the United States Gramophone Company, under the Berliner gramophone patents, including the exclusive license under the patent in suit, for an amount equal to about eight hundred thousand dollars, as shown by the said testimony of Mr. Haddon. It was also shown by the deposition of Mr. Haddon, in the Graphophone case, that the Victor Company has been paying six per cent. dividend per annum on all its stock since the organization of the company, in October, 1901, the stock being worth at least par. Emile Berliner also shows that the machines constructed under the patent in suit have gone into every country of the globe (Graphone Record, p. 63).

The Validity of the Scope of Claims 5 and 35 Sustained in the Former Litigation.

Re Validity.

The claims, five and thirty-five of this Berliner Patent No. 534,543, in suit, have passed *through fire and water* in the various cases in which these complainants have enjoined other defendants, and have come out unscathed, and their validity affirmed in several decisions of the United States Circuit Court and Circuit Court of Appeals, for the Second Circuit, in which cases the patent was most vigorously attacked, and every known defence presented and carefully elaborated by astute and eminent counsel for defendants.

A large number of these cases have been reported in the Federal Reporter, and the first one to which reference will be made, is that in which we have referred to herein as the "Graphophone" Case.

Victor Talking Machine Company and United States Gramophone Company v. American Graphophone Company (140 Fed. Rep., 860; Record, p. 63: a copy of which is attached to this brief).

As will be noted from the caption of this case, the complainants were the same as the complainants herein, the defendant being the American Graphophone Company. This suit was in the U. S. Circuit Court for the Southern District of New York, and was instituted about the beginning of 1904, and was vigorously contested by the defendants who attacked the validity of the patent, under various defences, and came on for final argument on full pleadings and proofs before Judge Hazel, on June 5 and 6, 1905, and was taken under advisement, an opinion being filed September 28, 1905, holding claims five and thirty-five, of said patent No. 534,543, in suit, valid, and infringed by the defendant's talking machine, an injunction being ordered, with costs to the complainants.

Same Case on Appeal (Reported 145 Fed. Rep., p. 350; Record, p. 73, a copy of which is attached to this brief).

An appeal was taken and perfected from the decree of the Circuit Court and was duly argued before the United States Circuit Court of Appeals for the Second Circuit on January 17 and 18, 1906, which Court of Appeals affirmed the decree of the lower Court on March 9, 1906, sustaining the validity of said claims and holding that they were infringed.

About the latter part of April, 1906, application was made to the United States Circuit Court of Appeals for leave to file a bill in the nature of a bill of review on alleged newly discovered evidence, and was refused by said Court in 1906, reported 148 Fed. Rep., p. 1022. A final decree was entered in the Circuit Court and a perpetual injunction duly served upon the defendant.

The next cases to which reference will be made are those involved in this present litigation, and although this is set out at length in different parts of this present brief, yet to give a consecutive history of the litigation in which the patent in suit has been engaged, this litigation will be briefly referred to at this point for the sake of uniformity. These were the cases filed against the Leeds & Catlin Co. and the Talk-O-Phone Company, in the Southern District of New York, in Equity, respectively, 8797 and 8859; that against the Leeds & Catlin Company being filed in July, 1904, and against the Talk-O-Phone Company, in September, 1904. Shortly after the final decree in the suit against the American Graphophone Company motions for preliminary injunction were made against the Leeds & Catlin Company and Talk-O-Phone Company, and were argued before Judge Townsend on a voluminous record, the defendant's opposing affidavits covering about 200 typewritten pages, and defendant's Exhibit Letters Patent, was a book of 135 pages. It was argued at length upon voluminous briefs, and on April 26, 1906, Judge Townsend filed an opinion granting preliminary injunctions in each of said cases. (Reported 146 Fed. Rep., p. 534; R. p. 318, a copy of said opinion being attached to this brief.

Upon application of the defendants and upon the filing of bonds, the said preliminary injunctions were stayed pending appeal. The Leeds & Catlin Company

and Talk-O-Phone Company took and perfected appeals, the transcript containing about 550 pages. These appeals were argued before the Circuit Court of Appeals for the Second Circuit on October 11 and 12, 1906, before Circuit Judges Wallace, Lacombe and Coxe, the briefs of each party covering about 215 printed pages. On October 12, the said Circuit Court of Appeals, in open court, affirmed the decree of Judge Townsend, granting said preliminary injunctions, Judge Wallace speaking for the Court (reported 148 Fed. Rep., 1022), and thereafter mandates were duly issued and filed and decrees for preliminary injunction entered on October 27, 1906, and the preliminary injunctions were duly served upon the said defendants, the Leeds & Catlin Company and the Talk-O-Phone Company.

Subsequent to the issuance of said preliminary injunctions, the Leeds & Catlin Company, continued to manufacture and sell, disc talking machine records for use in combination with the reproducing apparatus of the patent, and upon being attached for contempt upon application of the complainants, on January 5, 1907, Judge Lacombe held the Leeds & Catlin Company in contempt, imposing a fine. (Reported 150 Fed. Rep., 147.) On appeal from the decision of Judge Lacombe, the Circuit Court of Appeals for the Second Circuit on May 2, 1907, affirmed said decree. (Reported 154 Fed. Rep., 158.)

From the decisions of the Circuit Court of Appeals, affirming the decree of Judge Townsend, granting preliminary injunction against the Leeds & Catlin Company, and affirming the decision of Judge Lacombe holding the Leeds & Catlin Company in contempt of the said preliminary injunction, this case is now before this Honorable Court on these writs of *certiorari*.

Victor Talking Machine Company and United States Gramophone Company v. Hoschke, et al., (158 Fed. Rep., p. 309, a copy of which opinion is attached to this brief).

The next suit, on the Berliner Patent, No. 534,543, where the validity of the patent was contested, was that of the Victor Talking Machine Company and United States Gramophone Company against William H. Hoschke, trading as the Sonora Phonograph Company, in the United States Circuit Court for the Southern District of New York, in Equity, No. 2-30, which was brought in October, 1907, a motion for preliminary injunction being made and argued before Judge Hough on December 6, 1907, the validity of the patent being vigorously attacked by the counsel for the defendant.

Vigorous opposition was made to the granting of said motion based upon voluminous affidavits presenting all of the defences which are presented herein, and this case was fully argued by opposing counsel. On December 28, 1907, Judge Hough filed an opinion granting the motion for preliminary injunction, in which opinion, among other salient points considered and passed upon and which were raised in this case Judge Hough said:

> "As to defendant's second contention, I do not think it true that the Courts of this circuit have not interpreted the scope of the Berliner patent. Judge Hazel declared that 'the lateral undulations in (complainant's) record automatically guide or propel the stylus and diaphragm in its course over the disc from its outer circumference toward the centre, and the stylus travels in an apparently direct radial path, while at the same instant of time it is pulsated or incited by the sound wave.' This is a description of the method of operation of complainants' talking machine.
>
> "The principle of operation of complainants' machine, as declared in the same decision (140

Fed. Rep., 863), is the 'lateral vibration of the stylus point and the propelling of the same over the surface of the record without mechanical assistance and through the means of the groove alone;' such is said to be the primary object of the inventor; and again (p. 864 of 140 Fed.), it is stated that the 'principle of Berliner's invention rests upon the practicability of propelling the stylus in the groove across the surface of the record without a feed screw or other mechanism.'

"It has thus been definitely held that Berliner's invention covers the reproduction of sound by means of a vibrating reproducing stylus, shaped for engagement with the laterally undulated groove of a sound record, and free to be vibrated and propelled by the revolving record itself, without the assistance or guidance of a feed screw or other mechanism."

Victor Talking Machine Company and United States Gramophone Company v. Douglas Phonograph Company.

In the latter part of September, 1907, a suit under this Berliner Patent No. 534,543, was filed by the complainants herein against the Douglas Phonograph Company, in the United States Circuit Court for the Southern District of New York, a motion for preliminary injunction being made, which was vigorously opposed by the defendant and fully argued by opposing counsel before Judge Lacombe on November 22, 1907, being taken under advisement. On December 19, 1907, Judge Lacombe filed an opinion granting the motion for preliminary injunction, which injunction was duly issued and served upon the defendant. In this case, the infringement complained, of, was the reconstruction and remolding of complainants' machine by the defendant.

Furthermore, this patent has been before the various Circuit Courts and Circuit Court of Appeals in

other litigation, notably that in reference to suits brought to restrain infringement of the patent by reason of the violation of conditions of license, under which the talking machines and records manufactured under the patent in suit were licensed to be sold by the Victor Talking Machine Company, for instance, such as selling machines and records at a less price than that at which they were licensed to be sold by complainant.

Among other suits in which **this patent has been involved** in litigation of this kind, may be mentioned the following, namely:

Victor Talking Machine Company, et al., v. The Fair (118 Fed. Rep., 609, and 123 Fed. Rep., 424).

This case was brought in the United States Circuit Court for the Northern District of Illinois, as first reported and was afterwards heard on appeal in the United States Circuit Court of Appeals for the Seventh Circuit. There was a vigorous contest on behalf of the defendant in both the Circuit Court and Court of Appeals, as to the question whether sale of the talking machine, at a less price than that at which the complainants had licensed it for sale, was an infringement of the patent in suit. The Court of Appeals reversed the Court below and held that such unlicensed sale was an infringement of the patent in suit.

Victor Talking Machine Company, et al., v. Shaffer & Salm.

This was a suit in the United States Circuit Court for the Southern District of Ohio, in Equity No. 5570, the bill being filed July 31, 1903. A demurrer was filed on behalf of Salm and an answer on behalf of Salm also, and at the hearing on the motion for preliminary

injunction on October 24, 1903, an affidavit was filed on behalf of Salm in opposition to said motion. There was no defense on behalf of Shaffer. At the argument of said motion for preliminary injunction, the demurrer was withdrawn, and the preliminary injunction granted and duly issued and served. Later on decrees for perpetual injunctions, *pro confesso* against Shaffer, by consent against Salm, were entered.

Victor Talking Machine Company, et al., v. Vim Company, et al.

This was a suit in the United States Circuit Court for the Northern District of Illinois, in Equity No. 7894. The bill of complaint was filed July 29, 1905. In this case a preliminary injunction was issued September 6, 1905, and duly served upon the defendants, and later on an attachment issued at the instance of the complainants, the defendants being held in contempt.

Victor Talking Machine Company, et al., v. Bentel.

This was a suit in the United States Circuit Court for the Western District of Pennsylvania, No. 25, November Sessions, 1905. The bill of complaint was filed October 20, 1905, and on the same day a temporary restraining order was issued and served. A motion for preliminary injunction made at the time of the filing of the bill of complaint was duly argued, but before a decision thereon had been rendered, the case was settled.

Victor Talking Machine Company, et al., v. The Keen Company.

This was a suit in the United States Circuit Court for the Eastern District of Pennsylvania, April Sessions, 1906, No. 32. Bill of Complaint filed June 21,

1906. A motion for preliminary injunction was made and was vigorously contested and opposed on behalf of defendant upon opposing affidavits, and on June 28, was argued by counsel for both parties before Judge McPherson, who granted a preliminary injunction which was duly issued and served. An appeal from said decree so granting the preliminary injunction was duly taken and perfected to the United States Circuit Court of Appeals for the Third Circuit and was argued by opposing counsel, the appeal withdrawn, and a perpetual injunction thereafter issued and served.

Victor Talking Machine Company, et al., v. Poppenberg, et al.

This was a suit in the United States Circuit Court for the Western District of New York, the bill of complaint being filed March 14, 1908. A motion for temporary restraining order was made and granted pending the hearing of the motion for preliminary injunction. Thereafter, and on March 23, 1908, before the hearing on the motion for preliminary injunction, a decree for perpetual injunction was made and entered, and a perpetual injunction issued and served upon the defendants in accordance therewith.

Victor Talking Machine Company, et al., v. Bearwald.

This was a suit in the United States Circuit Court for the Southern District of New York. In Equity No. 2-182, the bill of complaint being filed March 24, 1908, on which day a temporary restraining order was granted, followed by a preliminary injunction after the hearing on the motion therefor in open Court, on April 3, 1908; said preliminary injunction afterwards being made perpetual.

Victor Talking Machine Company, et al., v. Futernik.

This was a suit in the United States Circuit Court for the Eastern District of Pennsylvania, in Equity No. 105, April Sessions, 1908. The bill of complaint was filed June 15, 1908, and on the same day a temporary restraining order was granted. Thereafter, and on June 19th, a motion for preliminary injunction, which was made at the time of the filing of the bill of complaint, came on for hearing before Judge McPherson, the defendant filing an opposing affidavit and being represented by counsel. The motion for preliminary injunction was argued by respective counsel, counsel for defendant opposing the same. The said motion for preliminary injunction was granted on the same day, the preliminary injunction being issued and served on that date, and thereafter, and on August 24, 1908, a final decree for perpetual injunction was issued, the perpetual injunction being served on that date.

RE DEFENCES IN AMERICAN GRAPHOPHONE COMPANY CASE.

In order that the Court may know what were the defences presented in the American Graphophone Company case, they are herein inserted briefly, as follows:

1. Anticipation by Bell & Tainter Patent, No. 341,214, and Suess U. S. Patent, No. 427,279.

2. Prior public use for more than two years before the application, based on Berliner's lecture and demonstration of May 16, 1888, before the Franklin Institute.

3. Abandonment, based on the article in the "Electrical World" of November 12, 1887.

4. Abandonment by acquiescence in Suess United States Patent, No. 427,279.

5. Expiration of the patent in suit by reason of expiration of prior French Patent, No. 205,491, to Suess.

6. Want of jurisdiction by the Court by reason of the agreement in evidence between the parties.

7. That the patent in suit, No. 534,543, was not based on Berliner's invention, the construction being shown in the Suess patent, and not that shown in Berliner's application filed November 7, 1887, for Berliner Patent, No. 564,586.

8. Claim five is not for a patentable method.

And other less important defences.

The defendant's proofs consisted in:

Deposition of Sheldon T. Cameron, expert.
Deposition of Emile Berliner.

The prior references introduced were:

U. S. Patent, No. 341,214, to Bell & Tainter.
U. S. Patent, No. 241,288, to Bell & Tainter.
U. S. Patent, No. 427,279, to Suess.
U. S. Patent, No. 564,586, to Berliner.
U. S. Patent, No. 688,739, to Jones.
U. S. Patent, No. 562,694, to Amet.
British Patent, No. 1644, of 1878, to Edison.
French Patent, No. 205,491, to Suess.
Article on Berliner's gramophone in the "Electrical World" for November 12, 1887.
Paper read May 16, 1888, by Emile Berliner, on the gramophone, before the Franklin Institute, and alleged public use of the device on that occasion.

File wrapper and contents of patent in suit, No. 534,543.

Copies of affidavits of E. R. Johnson, filed December 14, 1900, and January 5, 1903.

Stipulation as to translation of Suess French Patent, No. 205,491.

The contention in regard to the Suess French Patent, 205,491, was that it was applied for prior to the U. S. patent in suit, and, being for the same invention as the Berliner U. S. patent, the U. S. patent in suit had expired with the expiration of the French patent.

The defendants filed an exhaustive brief both in the Court below and in the Court of Appeals, and also a supplemental brief; the case was most fully and elaborately argued in the Court of Appeals, as well as in the Circuit Court.

RE THE DEFENCES OF THE PRESENT DEFENDANT.

The present defendant, since the decision sustaining the patent in suit, has naturally been most anxiously and solicitously canvassing around for some new data which might tend to invalidate the patent in suit, not before the Court in the other case, so that it might be enabled to **continue the pirating** of the complainants' invention, both as to machines and records, claimed and protected by claims five and thirty-five, of Patent 534,543, in suit.

In passing it should be noted that the defendant has comparatively recently come into the field and copied complainants' machines and records since the complainants have made a great success, and world-wide reputation, in the manufacture and sale of their

talking machine, and records, the subject-matter of the suit, and without any pretence or excuse, except the alleged invalidity of the patent.

The defendant now claims to have very important "new matter." It is respectfully submitted, however, that a careful reading of the voluminous affidavits and exhibits produced by this defendant in these cases in opposition to these motions, shows very clearly that these are desperate efforts of the defendant to magnify unimportant details, most of which have, in one form or another, been before the Court of Appeals in the suit against the American Graphophone Company.

In all these various defences raised by defendants, there is not a single invention of another prior inventor produced which was not in the Graphophone case.

There is no new prior art produced.

There is no new alleged anticipation.

The alleged new defence rests entirely upon the consideration of certain strained technicalities regarding the alleged effect of certain other patents to Mr. Berliner upon the claims 5 and 35 of the patent in suit.

The character of the defence illustrates most forcibly and clearly the straits to which this defendant has been put in this desperate effort to enable it to continue the infringement.

The alleged new matter is set forth in detail in the affidavit of Mr. Louis Hicks (R. p. 80 and 216), who is counsel for the defendant in each of these cases (Leeds & Catlin and Talk-O-Phone Co. cases).

DEFENCES TO THIS MOTION CONSIDERED.

As hereinbefore noted, a number of the fifteen points of defence raised in the defendant's brief in the Court below are based entirely upon questions which were raised and determined in the suit against the American Graphophone Company, both by the Circuit Court, and by the U. S. Court of Appeals.

The entire defence, however, relative to alleged new matter, might have been boiled down to practically three questions, viz.:

(1) What effect has the expiration or forfeiture, by failure to pay the first renewal fee, of the Suess Canadian on the Berliner U. S. Patent No. 534,543, in suit?

(2) What effect upon the Berliner patent in suit has the expiration of the prior Berliner German Patent No. 53,622, of November 20, 1899, for a sound box, and the prior Berliner French Patent No. 207,090, of July 19, 1890, for a sound box.

(3) What effect upon the claims five and thirty-five of the Berliner patent in suit has the expiration of the prior Berliner British patent, No. 15,232, of 1887, and the corresponding German and French patents?

We will consider hereinafter (beginning at p. 83 of this Brief), the points in their order, as pursued by defendant in its petition for *certiorari*. We will, however, preliminarily consider:

The Relation of Berliner's Earlier U. S. Patents to His Subsequent Patent No. 534,543, in Suit Containing the Basic Claims 5 and 35.

Defendant's counsel in the Courts below, as noted in point one in his brief in the United States Circuit

Court of Appeals (a copy of which is attached to the petition for writ of *certiorari*, pages 7 to 36), devoted considerable argument and attention in an endeavor to show that the Berliner basic invention was patented in the Berliner patent No. 372,786, of May 4, 1887 (R. p. 416), and No. 382,790, of May 15, 1888 (R. p. 434), and that the claims five and thirty-five of the patent in suit, No. 534,543, claimed only improvements such as were illustrated in the constructions shown in Figs. 4, 5, 6 and 7, of the drawings of the patent in suit. As it is quite probable that the defendant will in his brief on appeal, which we have not yet seen, argue this proposition, in order that there may be no misunderstanding this subject will be herein considered at sufficient length to explain to the Court just what Mr. Berliner's earlier invention was, and that the broad basic invention did not come until about November 7, 1887, when he filed his application for United States Patent No. 564,586, and disclosed it in Fig. 10, as well as described in the specification, it being claimed, however, subsequently in the later co-pending application, which became United States Patent No. 534,543, in suit. (See opinion of United States Circuit Court of Appeals in this case, R. p. 73, a copy of which is also hereto attached).

This defence noted above and urged in the Courts below, in substance, is that the Berliner basic invention was patented in the Berliner U. S. Patent No. 372,786, issued November 8, 1887, filed May 4, 1887 (R. p. 416); that the patent in suit, No. 534,543, including claims five and thirty-five, describes and claims only improvements upon what the defendant calls the earlier basic patent, and that the Circuit Court, therefore, erred in holding that claims five and thirty-five are entitled to the broad construction given them by this Court. Point One also contains the statement that the Court below erred in holding that the patent in suit, as to claims

five and thirty-five, did not expire with certain foreign patents to Berliner.

In considering this point, defendant's counsel intimates that Judge Townsend, in deciding the case did not give sufficient examination to the authorities. There was only one question upon which Judge Townsend seemed to have any doubt whatsoever, and for which your Honors, it is submitted, will see there was no occasion, that was the effect of the lapse, or expiration, of the Suess Canadian patent by failure to pay the first renewal fee. On all the other questions Judge Townsend was most emphatic in his finding, and very justly so. He reviewed all the issues raised by the defendants, and decides them to be untenable. It is clear, from a careful reading of his decision (R. 318), that he carefully reviewed the evidence, and did not slight it.

Re Berliner Patents, 372,786, *and* 382,790.

The defendant's counsel in the Court below contended under Point One (Brief, p. 9, attached to petition), that in the prior suit against the American Graphophone Company the evidence was not sufficient to differentiate Berliner's basic invention from the improvements made by Berliner. He contended that by reason of the defences interposed in the prior suit the question of what was the basic invention was not important, but how counsel arrives at the conclusion that it is important now, and not then, is not stated. He further stated on page 10, of same brief, that even if the Court of Appeals in the Graphophone case had stated that claims five and thirty-five were "broader claims" then in No. 564,586, they were not for the basic invention, and contended that "the new proofs show that on May 4, 1887, Berliner applied for, and on November 8, 1887, obtained his first patent, No. 372,786 for the gramophone," and then argued (under former

Brief, p. 10, attached to Petition), that this patent, No. 372,786, and Berliner's patent, No. 382,790, of May 15, 1888, for Method of Making Records, were Berliner's basic patents.

It was practically admitted by defendant's counsel that the essential thing in these two Berliner patents, No. 372,786 and 382,790, was the undulatory groove of even depth in solid resisting material. He says (former Brief, p. 11), "This was Berliner's basic invention." Let us assume here the proposition that the undulatory groove of even depth in solid resisting material, for reproducing sound, and the method of recording the same was the essential thing in these two prior patents, and the attention of the Court is called to the Berliner Patent No. 372,786 (R. p. 416) and to the Berliner Patent No. 382,790, of May 15, 1888 (R. p. 434). The defendant's counsel tries to make capital out of the fact that these two patents were not actually used in evidence in the prior Graphophone suit. *The fact is that they were not used because they were of no use, and had no bearing upon the question;* not because they were unknown to the defendant, as patent No. 382,790 is referred to in the specification of the patent in suit (lines 15 and 16, p. 1, of the specification, R. p. 456), and by reference to this Berliner's Patent No. 382,790 (R. p. 434), we in turn find, on lines 8 and 9, reference to the Berliner Patent No. 372,786, of November 8, 1887. Berliner Patent No. 382,790 is for a Process of Making Sound Records of the laterally undulating type of even depth by an etching method. In other words, it is for the *process of making records* of this character, and does not illustrate, or describe, any apparatus for reproducing sound from the records, or in connection with the records, other than it states:—"In a patent granted me November 8, 1887, No. 372,786 I have described a method of recording and reproducing spoken words and other sounds." It then goes on to state that

in connection therewith the inventor had described a process of producing a record by photo-engraving, and then states, "My present invention is an improvement upon that described in my aforesaid patent."

The Berliner Patent No. 372,786 shows, in the drawing and describes in the specification (R. p. 416), a sound record of the gramophone type, having a laterally undulating groove of even depth in solid resisting material, mounted on a cylinder, with a diaphragm and sound box *rigidly attached to the base of the machine,* with a stylus connecting with the diaphragm engaging in the record groove.

It is defendant's counsel who calls this Berliner's *basic* invention. It is true it shows Mr. Berliner's first crude mechanism for reproducing sound from a record of stylus for reproducing sound from a record of the gramophone type, as distinguished from the Edison phonograph record or the graphophone record of the *vertically undulating type.*

There is, however, nothing whatsoever in either of these two patents, No. 372,786 or No. 382,790, which suggests, or discloses, Berliner's subsequent broad invention, contained in claims five and thirty-five of his subsequent Patent No. 534,543, in suit.

There is nothing in either of these two patents which shows the Berliner subsequent method of simultaneously vibrating and propelling a stylus point automatically across the face of the record through the medium of the record groove, and without the aid of any auxiliary feeding mechanism, nor is any apparatus therein shown for this purpose.

The taking out of a prior patent for a certain method and apparatus does not preclude the same inventor from subsequently applying for and patenting a basic method and apparatus relative to the same art, and differing materially from that of the first patent.

The object of defendant's counsel in taking his po-

sition, and voluntarily calling the Berliner Patent No. 372,786 *the basic patent*, is for the purpose of later endeavoring to show that the subsequent inventions of the same inventor in the same art could be nothing more than detailed improvements. It is quite evident, however, and requires no argument to show that the method of claim five, and the apparatus of claim thirty-five, in the patent in suit, while they may be improvements over No. 372,786, *in the sense that they are better both as to method and apparatus*, they were at the same time radically different and basically new. The apparatus shown in No. 372,786, Fig. 1 (R. p. 416), was a fixed sound box, merely reproducing from a single continuous record, groove on the periphery of a cylinder.

The method of claim five, and the apparatus of claim thirty-five, subsequent to the invention of 372,786, *which made his gramophone a world wide success, is due to the invention of Mr. Berliner.*

Defendant's attempt is to show that claims five and thirty-five are not to be broadly construed, but are to be limited, as defendant stated, on page 18 of its former Brief, "by the improvements in the details of the reproducer, whereby the stylus, provided with a wedge-shaped point, so shaped for engagement with the record, is permitted to be vibrated in the manner described."

Counsel for defendant, without any plausible, or logical, reason, and without the addition of any substantial light contends that certain unwarranted and illogical limitations should be placed upon these claims 5 and 35.

Defendant's counsel also attempted to show that there could be no broad claims in Patent No. 534,543, in suit, for the reason that the patent states that the invention refers to certain improvements, which statement,

as is well known, is a most common and customary statement to make in patents.

It is submitted, however, that the first statement in the patent (p. 1, lines 8, etc.), shows that the invention is broadly referred to. It states:

> "My invention has reference to **improvements in the method of and apparatus for recording and reproducing sounds,** the improvements being more particularly directed to the construction of that kind of sound recording and reproducing apparatus which I have called 'gramophone' and for which Letters Patent of the United States, No. 382,790, dated May 15, 1888, have been granted to me."

It is clear, from this statement, that the inventor had *an improved method and apparatus for recording and reproducing sounds,* particularly in connection with that type of record known as the gramophone, for which a method of making records was described and claimed in Berliner's prior patent No. 382,790, of May 15, 1888.

That Berliner had *improvements* in the method and apparatus of recording and reproducing sound over the method and apparatus of Edison and Bell & Tainter is clear from the record in this case, and as decided by the U. S. Circuit Court of Appeals in the Graphophone case.

In Patent No. 382,790, of May 15, 1888 (R. p. 434), it is not stated that anything contained in this patent is an improvement upon the reproducing apparatus of the Berliner Patent No. 372,786, but that it does describe an improvement in the method of making records in solid resisting material by the process of direct etching; that was what the Berliner Patent No. 382,790 covered. The process of making records in the Berliner Patent No. 372,786 differed from this etching process.

Berliner's Patent No. 564,586, filed November 7, 1887, but not issued until July 28, 1896 (which contains

an illustration (Fig. 10), and description of the method and apparatus of claims five and thirty-five of the patent in suit), refers to the Berliner patent, No. 372,786, and states, on line 19, p. 1, etc., that that invention "consists in first causing the sounds to inscribe themselves upon a layer of non-resisting material in a manner substantially like that practiced by the well-known Leon Scott phonautograph, then copying the phonautographic record in solid resisting material, preferably by the photo-engraving, and then reproducing the sounds from the solid copy of the record." None of these patents, however, submitted, detract from the scope of the basic character of the method of claims five and thirty-five. As to Patent No. 564,586, this invention of claims five and thirty-five is in this patent, and shows this basic Berliner invention to have been invented at least as early as November 7, 1887, the date of the application.

All Defences in the Graphophone Suit Regarded as Res Adjudicata by the U. S. Circuit Court of Appeals, and Not Before it as Defences in the Present Suit. Only the Defences Considered Below Should be Reviewed by This Honorable Court.

The U. S. Circuit Court and Court of Appeals in the prior Graphophone case, had everything material before it upon which to determine the breadth and scope of the claims five and thirty-five of the Berliner patent in suit and regarding all the defences raised and previously decided in that case as *res adjudicata* very properly refused to again consider such defences so all such defences as were raised and previously decided in the Graphophone case as the[y] were not considered by the Court below in this case are not the subject of review by this Honorable Court. It had among other things the Berliner patent, No. 564,586, particularly before it, and the other Berliner patents, Nos. 372,786 and 382,-

790, and as will appear from a careful inspection of them, could have no bearing upon the scope of these claims.

For the same reason, the Werner Suess U. S. Patent No. 427,279, of May 6, 1890 (R. p. 446), was intelligibly and fully before the U. S. Circuit Court and Court of Appeals, and these two prior Berliner patents could in no manner affect this interpretation. In relation to this Suess U. S. Patent, Judge Hazel, in deciding the prior suit said (R. p. 68):

> "In the Suess patent is contained a description corresponding to the features of Claim thirty-five, in suit. The primary object of Suess, an employee of Berliner, however, was merely to construct a suitable pivotal support for the diaphragm and stylus, so as to assist such device in its passage across the record. It is expressly stated in the specification of the Suess patent that the invention relates to improvements in the reproducing apparatus of Berliner, and that the construction and mounting of the stylus form no part of the invention. The improvement of Suess, therefore, is not an anticipation."

It is to be borne in mind that the claims of this Suess U. S. Patent were narrowly limited to the Suess details of improvement, and that the patent contained no broad claims.

Defendant's counsel also urged in the Courts below, contrary to the testimony, that Judge Hazel had no means of knowing the extent of Suess's improvements. The testimony was very full and conclusive in this regard, showing that Mr. Berliner invented the basic invention of claims five and thirty-five as early as November 7, 1887, the date of filing of the Berliner application for Patent No. 564,586, in which this invention was illustrated and described, that the Berliner invention was also described in the "Electrical World" of November 12, 1887 (R. p. 243), and that on May 16,

1888, Mr. Berliner delivered a lecture at the Franklin Institute, in Philadelphia, describing and demonstrating his invention, and giving to Mr. Suess, who was present as his assistant, the credit (R. pp. 245, 270) of having suggested that the sounder be mounted on a *pivot*, such as illustrated in reprint of the lecture (R. p. 269, Fig. 2) instead of on a traveling carriage suspended on rollers on a rail, such as illustrated in Fig. 10 of Berliner Patent No. 564,586, filed November 7, 1887, and described in the specification of that patent and such as referred to in the "Electrical World" of November 12, 1887. (R. p. 243.) Mr. Berliner states, in his Franklin Institute lecture (R. p. 270):

> "In the description of November 12, 1887, I advanced the idea of mounting the sounder on a carriage and rails, and have the record groove itself be the screw which was to guide the point of the stylus across the disk from periphery to center. This has been improved upon by Mr. Werner Suess, the gentleman here with me to-night, who is the mechanician of our little shop in Washington. He suggested to mount the sounder on a pivot at some distance from the disk, and then let the reproducing groove guide the sounder across the disk over an arc of flat amplitude."

The Suess U. S. Patent No. 427,279, issued May 6, 1890 (R. p. 446), was filed August 6, 1889, considerably over a year after the date of the Berliner Franklin Institute lecture, and admitted Mr. Berliner to be the inventor of the gramophone. Mr. Suess merely put in his patent application restricted claims for specific improvements, all in accordance with the evidence.

Mr. Berliner's acts were entirely consistent. He had filed his application November 7, 1887, for Patent No. 564,586, embodying in the specification and drawings this invention subsequently claimed in claims five and thirty-five of Patent No. 534,543 later applied for and issued prior to the issue of Patent No. 564,586.

Mr. Berliner, therefore, having filed this application with this invention described and illustrated in it, had a perfect right to assume that he was protected, and that he might safely make such disclosures as he did make in the Electrical World, and in the Franklin Institute lecture.

Notwithstanding the decision of the Courts in the Graphophone case, which the courts below in this case regarded as *res adjudicata,* and did not review the defences there made, counsel for defendant in this case, without any substantial reason, without any material new evidence, is contending that the Honorable Court of Appeals was wrong in giving to claims five and thirty-five the interpretation which it did, his reasons being based upon his reading of the specification of the Patent No. 534,543.

RE ATTEMPT TO MISCONSTRUE THE PATENT IN SUIT.

It is defendant's counsel's attempt, by a juggling of the words of the specification of the patent in suit (R. p. 456), to show that the specification (page 1, lines 17, etc.) stated that the features of the invention related to tracing on a fatty film undulatory lines, etc., and that the other features have reference to the construction of details. If defendant's counsel would take the specification as a whole, he would find abundant authority, as has been found by the U. S. Circuit Court of Appeals, to show that the invention related to improvements in the method and apparatus for reproducing sound, such as that claimed in claims five and thirty-five. The specification (p. 1, lines 8, etc., R. p. 456) states:

> "My invention has reference to improvements in the method of and apparatus for recording and reproducing sounds * * *"

It then goes on to state that the improvements are *more particularly* directed to the construction of that kind of sound recording and reproducing apparatus called the gramophone and referred to in the Berliner Patent No. 382,790.

It is apparent, therefore, that the broad, primary statement is to the effect that the invention of the patent relates to the improvement in the **method** and **apparatus** for **recording and reproducing sounds.**

There is no positive statement here that the improvement described is an improvement on the Berliner Patent No. 382,790, which was for a method of making zig-zag records. It says that the invention is "more particularly directed to the construction of that kind of sound recording and reproducing apparatus which I have called 'gramophone'."

It is apparent that it was an improvement over the prior Edison phonograph and the prior Bell & Tainter graphophone, which Berliner styled the Gramophone.

But even supposing that the invention of the patent in suit was an improvement on the construction shown in the Berliner prior patent, No. 372,786, this fact could in no manner affect, under the circumstances, the scope of claims 5 and 35.

The specification then goes on to state (p. 1, line 17, etc.), after the invention broadly has been referred to, that one feature of the invention is the method of recording sound by tracing on a fatty film the undulatory lines, and then etching the lines in a metal base; and then it goes on to state that other features relate to details.

The specification (p. 4, line 95 to p. 5, line 18) describes *one form of apparatus* for carrying out the method of claim five, being one form of apparatus included in claim thirty-five. The specification, on p. 5, lines 19 to 34, describes *the method* of reproducing,

such as illustrated and described in the specification of that patent, as well as illustrated in Fig. 3 of the patent in suit, in the apparatus shown in Fig. 10 of Berliner Patent No. 564,586 (R. p. 465), which the U. S. Circuit Court of Appeals in affirming the Court below in the Graphophone suit, has decided was full warrant for making the claims five and thirty-five in Patent No. 534,543, in suit. In this connection, the U. S. Circuit Court of Appeals said in the Graphophone suit (R. p. 73):

> "The specifications in that application (for 564,586) were full enough to warrant the making of the claims here in controversy (five and thirty-five); at any time the application might have been amended by adding such claims, and in our opinion it is immaterial that, instead of thus amending it, he took the broader claims on another application filed while the first was pending. The second may fairly be considered a continuation of the first, and thus Berliner's application antedates the public use, and the facts will not sustain the contention that he abandoned his invention here in suit."

Defendant's counsel comments on the fact that Mr. Berliner in the specification of Patent No. 534,543 (p. 1, line 51), refers to "my improved gramophone recorder—" and on p. 4, line 95, in describing the reproducing apparatus, says "*the* reproducing apparatus." It is clear that this was quite a natural change in phraseology at that point of the specification on p. 4, line 95, after he had previously referred to the reproducing apparatus, and referred to it as "*the* reproducing apparatus" meaning that to which he had previously referred. The patentee had stated (p. 1, line 8) that "my invention has reference to improvements in the method of and apparatus for recording and reproducing sounds—." The fact that the patentee happened to use the definite article afterwards, instead

of the possessive pronoun, meant nothing. He frequently, throughout the specification, used the definite article in describing the constructions which were admittedly Berliner's invention, and claimed in the claims.

RE DEFENDANT'S CONTENTION THAT 5 AND 35 ARE FOR SPECIFIC CONSTRUCTIONS OF REPRODUCERS SHOWN IN FIGS. 6 AND 7.

Defendant's counsel also (former Brief, p. 17) endeavored in the Court below, and doubtless will here, to show that the essence of claims five and thirty-five are specific constructions of the reproducer illustrated in Figs. 6 and 7 of the patent, No. 534,543. How he arrives at this conclusion he, however, does not distinctly state.

His reason for making this deduction is manifestly so that, thereafter he may attempt to prove that the Berliner German patent, No. 53,622, *of November* 20, 1889, *embodying a reproducer, and the Berliner French patent, No.* 207,090, *of July* 19, 1890, *showing a recorder and a reproducer, limited the claims by the expiration of those patents.*

The claims of the patent in suit are thirty-five in number; many of them relate to the method of recording the sound waves on a plate to be etched, and the method of etching the same. A number of them refer to the construction of the sound box and its connection with the stylus. Some of them claim the recording apparatus, and some of them certain details of construction. There is no claim for the *specific form* of a pivoted swinging arm reproducer, as shown in Fig. 3. This was merely one form in which Mr. Berliner's invention of claims five and thirty-five could be employed. Other forms could have been shown, as, for instance, that illustrated in Fig. 10 of the Berliner Patent No.

564,586. Mr. Berliner, in his Franklin Institute lecture in May, 1888 (R. p. 270, Fol. 809) describing his basic invention, gave Mr. Werner Suess the credit of having suggested the use of a *pivoted* arm in carrying out Mr. Berliner's invention, instead of the suspended carriage or trolley construction shown in Fig. 10 of the patent No. 564,586, but Werner Suess never claimed to be the inventor of the method of claim five or the broad apparatus of claim thirty-five. Mr. Berliner was the undisputed inventor and was always so regarded. Mr. Suess, when he took out his U. S. Patent, No. 427,279, of May 6, 1890, corroborates this by claiming only details of construction.

Defendant's only ground for the contention that Suess was the inventor is that the patent attorney, in applying for the Suess Canadian patent, taken out by Berliner as assignee of Suess, happened to include two or three claims which were broader than the claims of the prior Suess U. S. application, and which it is contended were broad enough to include the Berliner claims five and thirty-five, of the patent in suit.

In fact, defendant's main contention in this case rests upon the fact that two or three broad claims accidentally got in to the Suess Canadian patent No. 41,901, issued February 11, 1893, applied for May 5, 1891.

At that time the Canadian patent office made no examination into the prior art.

That Mr. Berliner, or his attorney, in conducting the Suess Canadian application had no intention of admitting Suess to be the inventor of the invention of the patent in suit, No. 534,543, is conclusively evidenced by the fact that Mr. Berliner, through the same attorney, applied on a Canadian patent for the same invention as in U. S. patent 534,543 on December 7, 1895, which Canadian patent was granted February 24, 1897, with the same claims, including claims five

and thirty-five in suit (R. pp. 315-317, and stipulation p. 540).

As hereinbefore shown, the Suess Canadian patent was granted for a term of eighteen years, and even if it otherwise would have had any limiting effect upon claims five and thirty-five of the Berliner patent, No. 534,543, *in suit, the term of this Canadian patent has not yet expired.*

Re Question of Applicability of Siemans v. Sellers, 123 U. S., 276.

The defendant contended in the U. S. Circuit Court of Appeals that the Circuit Court was in error in its understanding and interpretation of the decision of Siemans *v.* Sellers, *supra.* As the defendant's counsel will doubtless consider this same question more elaborately in another portion of his brief, we will consider it later under a separate heading.

We submit that the Berliner patent, 372,786, which showed the first Berliner rigidly mounted reproducer without any means for propelling the reproducing stylus through the medium of or in accordance with the record, had nothing to do with claims five and thirty-five in controversy, and could not possibly have anything to do with the limitation of their scope.

As hereinbefore more fully pointed out, prior to the invention by Mr. Berliner of the subject matter of claims five and thirty-five, it had not been discovered that **a vibrating stylus pulsating under the impulses of sound waves, could be automatically propelled by a record groove by contact with the side walls of the groove, without destroying or impairing the sound vibrations imparted to the stylus point.** No method prior to that invention existed for reproducing sound in the manner claimed by Mr. Berliner in claim five, by simultaneously vibrating and propelling the stylus

point across the face of the record through the medium of the record groove alone, and without the aid of any auxiliary feeding mechanism, and no talking machine apparatus existed prior to Mr. Berliner's invention, first shown in his application for patent for 564,586, Fig. 10, which was filed November 7, 1887.

Mr. Berliner's basic invention *for accomplishing this thing,* claimed in claims five and thirty-five, was first illustrated and described in his patent 564,586, filed November 7, 1887, and first claimed in the claims of the patent in suit, No. 534,543, claims five and thirty-five, which was filed March 30, 1892, and issued February 19, 1895, during the pendency of the application for patent 564,586, which was filed November 7, 1887, but not issued until July 28, 1896. His second application for patent 534,543, in suit, has been decided by the U. S. Circuit Court of Appeals "may fairly be considered a continuation of the first—" application for patent 564,586 (R. p. 74).

Even if the subsequent broad invention were an improvement over the first, that fact would not deprive Berliner of basic claims for his great subsequent discovery and invention of the method of claim five and apparatus of claim thirty-five, which has revolutionized the talking machine business in all parts of the globe.

Judge Hazel, in delivering the opinion of the Court below in the Graphophone case, said (Record, p. 68, Fol. 204):

> "it is manifest that the principle of Berliner's invention rests upon the practicability of propelling the stylus in the groove across the surface of the record, without a feed screw or other mechanism. By such adaptation to what is known in the art as a zigzag record (complainants' record) certain imperfections in the talking machines were overcome, and sound when reproduced was ren-

dered more intelligible. There was I think patentable novelty in the method which accomplished the result stated. The broad claims in suit in my judgment cannot be restricted to a record of even depth, such as described in the specification. The essence of such claims would seem to include a sound record which when in juxtaposition with the diaphragm of the stylus propelled in the manner described, is thereby enabled to successfully accomplish the primal object and purpose of the invention."

This was an improvement over what Berliner had previously invented, as shown in the old patent 372,786, but this in no manner detracted from the basic character of the improvement, or from the scope of claims 5 and 35.

Suess did not invent this; this fact was decided by Judge Hazel, and by the Circuit Court of Appeals, in the Graphophone case, and the fact that some broader claim than those of the Suess U. S. patent may have crept into the Suess' Canadian patent, cannot in any manner affect the fact that Berliner was the inventor.

It is clear that the fundamental features of claims five and thirty-five were in no manner embodied in Berliner patent, No. 372,786, or in the Berliner patent, No. 382,790.

Defendants' counsel under this head spends considerable time in criticizing the construction which has been given to the claim in the Graphophone suit by the Courts below, and in contending that claims five and thirty-five are for mere detail improvements.

Berliner Patent, 372,786, No Bearing on the Case.

Defendant's counsel contends that as Berliner's patent, No. 372,786, was not before the Court in the Graphophone Case, the Court held that the Berliner patent, No. 564,586, was the basic patent.

As hereinbefore pointed out, there was nothing in the Berliner patent, No. 372,786, to have caused it to be considered. Had there been it would have been considered, as it is mentioned and referred to in Berliner patent, 382,790, which latter patent is mentioned and referred to in patent in suit, 534,543. The fact is there was no reason for considering it in that case, or in this, any further than any other irrelevant patent.

Defendant's counsel suggests that the Berliner patent, 372,786, was not important in the Graphophone Case, although it is important here, but why it is important here and not in the Graphophone Case, he does not state.

The fact that Berliner described in patent 372,786, a process by which sounds could be inscribed upon a layer of non-resisting material in an undulatory line of even depth, and afterward copied in non-yielding or solid resisting material and reproduced, in no manner affected the scope of his subsequent invention, the subject matter of claims five and thirty-five.

The Foreign Patents Can Have No Effect on Term of Patent in Suit.

Defendant's counsel contends that Berliner's foreign patents tend to prove that claims five and thirty-five were mere improvements.

As hereinbefore more particularly pointed out, none of Berliner's foreign patents ever produced by the defence described or claimed the process of claim five or the apparatus of claim thirty-five, so they in no manner affect these claims, or their basic character, whether they were in evidence or not in the prior suit.

Defendant's counsel states that the Berliner British patent, 15,232, of November 7, 1887, covered the sub-

ject matter of the Berliner U. S. patents No. 372,786 and No. 564,586.

If this British patent covered the subject matter of the Berliner patent, No. 372,786, it could in no manner affect the issue in suit, *and it is admitted, as it must be by defendants' counsel, that Fig.* 10 *and the description thereof of U. S. Patent,* 564,586, *is entirely omitted from the Berliner British patent,* 15,232.

As this omitted part was the only part in 564,586 which had any reference to claims five and thirty-five of the patent in suit, the British patent 15,232 could have no effect upon the issue in controversy, as hereinafter more particularly pointed out. If the Berliner British patent, No. 7,204, of May 15, 1888, corresponds, as stated, to the Berliner U. S. patent, No. 382,790, of May 15, 1888, this can in no manner affect the issue in controversy, as, as hereinbefore pointed out, Berliner patent, 382,790, is not for any reproducing mechanism, nor does it describe any, but is for a process of making records by etching.

For the same reason Berliner's French patent, No. 186,827, of November 8, 1887, and German patent, No. 45,048, of November 8, 1887, if they correspond, as stated by defendants' counsel, to the Berliner British patent, No. 15,232, can have no bearing on the issue in controversy. This is likewise true of the Berliner French patent, No. 190,602, of May 15, 1888, and German patent, No. 47,099, of May 16, 1888, if they correspond, as stated by defendants' counsel, to the Berliner English patent, No. 7,204.

All that the Berliner French patent, No. 207,090, of July 19, 1890 (R., p. 126), describes and illustrates is a sound recorder and reproducer; even if these sound boxes, shown in the French patent, were the same, which is not admitted, as the sound boxes shown in Figs. 4, 5, 6 and 7 of the patent in suit, No. 534,543, it

could not affect the claims five and thirty-five in controversy.

The Berliner German patent, 53,622, shows only a reproducing sound box, which, even if it were the same as the reproducer shown in Figs. 6 and 7 of the patent 534,543, in suit, which we deny, could not affect claims five and thirty-five in controversy.

A Misleading Statement of Defendant.

The attention of the Court is called to the misleading statement of defendant's counsel as contained on pages 31 and 32 of the brief attached to the petition for *certiorari,* to the effect (p. 32) "In addition the said German (45,048), French (186,827) and English (15,232) patents claim and show in Figs. 8-16, the improvements set forth in United States patent, No. 564,586, upon Berliner's basic invention." This is misleading and untrue, as these patents *do not contain Fig.* 10 *of the Berliner U. S. patent,* 564,586, or any description of the apparatus there illustrated, which omitted parts are the only things in the U. S. patent, No. 564,586, which disclose or refer to the constructions claimed in claims five and thirty-five of the Berliner patent, 534,543, in suit. *The Court's special attention is asked to this misleading and unfair statement.* (See British patent, 15,232, R. page 516; U. S. patent 564,586, R. page 465). This statement, however, may not be repeated in defendant's brief to be filed in this Court on appeal.

It will appear from careful reading of these contentions in connection with the patents themselves, that it is a mere captious contention, that claims five and thirty-five are mere improvements upon Berliner's first machine shown in U. S. patent, No. 372,786, and a continuous repetition of defendant's previous arguments. Even if claim five was an improved

method and claim thirty-five an improved apparatus, this fact cannot affect the scope of the claims, and cannot affect the fact that they were basic patents as to the method and constructions which they embody.

The alleged new evidence of Berliner patents, No. 372,786 and No. 382,790, is immaterial, and can have no bearing upon the breadth and scope of claims five and thirty-five. The fact that claims five and thirty-five embody an improved and better method than that illustrated and described in said Berliner prior patents, in no manner affects their scope and character, and no different result would have been arrived at had these patents been specifically in evidence in the graphophone suit, and that they were known, cannot be denied, as 382,790 was specifically referred to in patent 534,543, and in 382,790 patent No. 372,786 was specifically referred to.

Defendant in subdivision (1) of Point One (p. 33) of its brief used in the Court below and attached to the petition in this Court, contends the defendant does not use the reproducer of the patent in suit. This is somewhat misleading. The defendant does not deny that they use the reproducing apparatus of claim thirty-five as construed by the Courts below in the Graphophone case, but what defendant does not use is the exact construction of reproducer illustrated in Figs. 6 and 7 of the patent in suit, which of course makes no difference in this issue.

The complainants do not use this either.

The defendant does use the apparatus of claim thirty-five, embodying the method of claim five as construed by the Courts in the Graphophone case, and does not deny that fact, though this statement contained on p. 33 of defendants' said former brief is misleading.

Defendant's contention in subdivision (m) of Point One in brief attached to the petition in this Court, is that the Berliner invention, called there the

basic invention (but meaning the invention of patent No. 372,786), and the Suess improvement such as illustrated and described in the Suess U. S. patent, No. 427,279 (R. p. 446) were patented in certain foreign countries before the grant of the patent in suit, and that as these patents have expired the corresponding Berliner U. S. patents have expired.

It will be borne in mind, however, that the foreign Berliner patents referred to were those hereinbefore noted, viz., Berliner German patent 53,622, of November 20, 1889; Berliner French patent 207,090, and Berliner English patent 15,232. These three patents, English, French and German, relate to the invention of the Berliner U. S. patent 372,786 and No. 564,586, **with the Fig. 10 of 564,586, and all description thereof, entirely left out, or rather never incorporated in them.**

The Berliner British patent, No. 7,204, of May 15, 1888; French patent, No. 190,602, of May 15, 1888, and German patent, No. 47,099, of 1888, corresponded to the Berliner U. S. patent, 382,790.

It is, therefore, clear that none of these patents embody the substantial invention of the Berliner patent 534,543, in suit, and did not embody the invention of claims five and thirty-five, and that therefore the expiration of these patents, under the authorities hereinafter fully considered, could not affect the life of the U. S. patent for this invention.

It is also contended by defendants that the Berliner-Suess Canadian patent, No. 41,901, of February 11, 1893, contained certain broadly worded claims in addition to the narrower claims corresponding to the Suess U. S. patent, No. 427,279, that as this Canadian patent lapsed at the expiration of six years by reason of the failure to pay the fees for the balance of the period of the term of eighteen years, that the claims in controversy of the Berliner patent 534,543 have lapsed and all rights forfeited. As hereinafter particularly

pointed out, however, it will appear clear that this Berliner-Suess Canadian patent, even if it contained the claims five and thirty-five of the patent in suit, can have no effect upon them, as it was granted for a definite fixed term of **eighteen years,** which period **has not yet expired.** The authorities are hereinafter referred to under a separate head, and it will be shown that Judge Townsend's decision in this regard was based upon the authorities.

Re Defendant's Point 1.

Defendant's point 1, as stated in its Petition for Writ of *Certiorari,* is as follows:

> First. Whether, under a proper construction of Sec. 4887 of the Revised Statutes as it existed when the patent in suit was granted on February 19, 1895, a home patent expires with the expiration of the legal term of a prior foreign patent granted to the same inventor, where the invention described and claimed in the prior foreign patent is an invention for which the home patent was granted, although the home patent contains claims covering subject matter not described or claimed in the foreign patent in addition to claims covering the invention described and claimed in the prior foreign patent.

As stated in the defendant's petition, this question was discussed under points 2 and 3 of the briefs in the Circuit Court of Appeals, both of the defendant and the complainants. A copy of the brief of the defendant in the Court of Appeals was attached to the defendant's petition for *certiorari,* and a copy of the complainants' brief in the Court of Appeals was attached to its brief in opposition to the said petition, which are respectfully called to the attention of this Honorable Court.

Point one of defendant is a contention that the Berliner German Patent No. 53,622, of November 20,

1889, embodies the reproducing sound box illustrated in Figs. 6 and 7 of the Berliner Patent 534,543 in suit, and claimed therein, and that this German Patent having expired on November 7, 1902, that the Berliner Patent in suit, No. 534,543, expired with it.

Point one also contends that the Berliner French Patent, No. 207,090, of July 19, 1890, embodies a sound recording device similar to that shown in Figs. 4 and 5, and a sound reproducing device similar to that shown in Figs. 6 and 7 of the Berliner Patent in suit, 534,543, and claimed therein, and that therefore this French Patent having expired July 19, 1905, that the Berliner Patent in suit, No. 534,543, expired with it.

These patents were not in evidence in the Graphophone suit, *manifestly because they were not regarded by the eminent counsel in that case as having any bearing upon the patent in suit.*

Judge Townsend in the Court below, on the motion for preliminary injunction, in passing upon this question said (R. p. 323):

> "I fail to find in the numerous cases cited by counsel, any authority for the proposition advanced by defendant, that if an article made according to the description of the prior foreign patent would infringe any claim of the American Patent, no matter how insignificant, then the two patents are for the same invention, and the American Patent expires in toto with the prior foreign patent. In fact, the interpretation placed by the Courts upon the decision of the Supreme Court in Siemens *v.* Sellers, *supra,* seems to be that the test is whether the principal invention of the domestic patent is found in the prior foreign patent.
>
> "I think from such brief examination as I have been able to give the authorities cited, that the rule contended for by the defendant does not apply to cases where the foreign patents which have expired do not cover the broad claims for the basic invention."

The German Patent, No. 53,622, is contained in the record (R. p. 150, etc.).

The French Patent, No. 207,090, is contained in the record (R. p. 126, etc.).

Assuming that this German Patent 53,622 was a patent of addition to German Patent No. 45,048, and expired November 7, 1902, with the German Patent 45,048 and that the French Patent No. 207,090 expired July 19, 1905, the complainants' contention is as follows:

Complainant's Contention Re German Patent No. 53,622, and French Patent No. 207,090.

1. These patents merely describe and claim only a sound box, and not the invention of claims five and thirty-five. If the specific sound box claims 24-34 of the Berliner Patent, No. 534,543, filed March 30, 1892, in suit, could be read upon in the sound boxes illustrated and described in the said German or French patents, filed in 1889 and 1890, respectively, or either of them, this fact, we submit, could not affect the fact that the **principal invention** of the patent in suit, viz—the broad invention of claims five and thirty-five had not been previously patented abroad so as to bring the **principal invention** of the patent within Section 4887 of the Statutes.

2. The sound boxes of these German and French patents also differ in detail construction from the sound boxes shown in Figs. 4, 5, 6 and 7 of the patent in suit.

We will consider the second point first.

The complainants contend:

The German Patent, No. 53,622, and the French Patent, No. 207,090, which were filed in 1889 and 1890,

respectively, were for specific detailed improvements relating only to the specific construction of sound boxes.

When Berliner filed his application for United States Patent, No. 534,543, in suit, March 30, 1892, it was for an entirely different invention, viz: his broad invention of claims five and thirty-five, as adjudicated by the Court of Appeals, and the detail construction of the sound box which he illustrated in Figs. 4, 5, 6 and 7, was not only quite materially different from the construction of sound boxes illustrated in the said German and French patents, which he had filed about two or three years previously, but the said sound boxes at best were for **minor details** of invention. Any sound box of the talking machine of that day—among others, such as shown in Berliner's prior United States Patent—could have been used in carrying out his **principal invention**—though this one might have been a preferred form. In these two or three years he had changed the construction of sound box, as hereinafter pointed out.

The complainants also show, for the other reasons hereinafter pointed out, that the German and French patents referred to can have nothing to do with the limitation of the term of the United States patent in suit.

1. The improvements shown in the German Patent, No. 53,622, and in the French Patent, No. 207,090, are admitted by the defendant to be specific improvements on Berliner's early sound boxes, such as shown in United States Patent, No. 372,786, and in the British Patent, No. 15,232, and the French and German patents corresponding thereto.

DRAWINGS OF GERMAN PATENT TO BERLINER NO. 53,622, NOVEMBER 20, 1889.

ie der Patentschrift 53622.

Emile Berliner in Washington. (Columbia, V. St. A.)

Neuerung an dem durch das Patent 45048 geschützten Verfahren und Apparat für das Registriren und Wiederhervorbringen von Tönen.

Fig. 1.

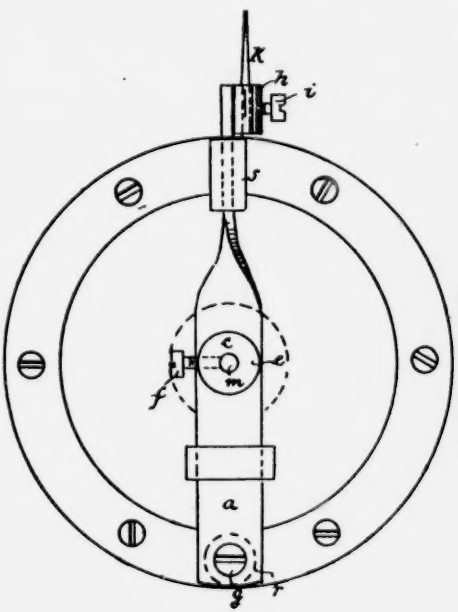
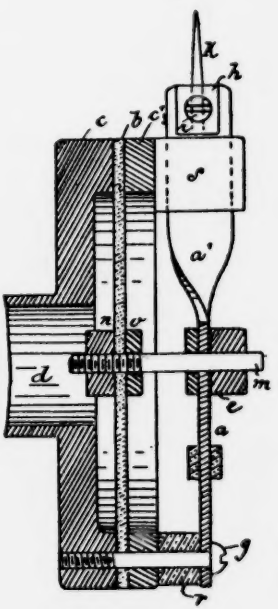


Fig. 2.



2. The German Patent, No. 53,622, is a second patent of addition upon the Berliner German Patent, No. 45,048, and is expressly so stated in the defendant's brief, and in the defenant's affidavits, and is stated in the body of this German Patent, No. 53,622, to be an "improvement upon the process and apparatus protected by Patent No. 45,048 for the recording and reproducing of sound." (This German Patent, No. 45,048, was in the answer in the Graphophone case.) It is further stated that it is a second addition to Patent No. 45,048, of November 8, 1887, and expires with that patent.

The specification of No. 53,622, as shown on page 64 of the defendant's opposing papers, refers back again to the chief Patent, No. 45,048.

3. This German Patent, No. 53,622, is therefore, an improvement on, and second patent of addition to German Patent, No. 45,048, of November 8, 1887, which is in defendant's answer in the Graphophone case, and is, therefore, in a sense, a part of it. (Transcript of Record, Graphophone case, p. 236.)

This French Patent, No. 207,090, is an improvement on the device described in the French Patent, No. 186,827, of November 8, 1887, which is also referred to in the said answer, and is mentioned in this French Patent of addition.

Defendant's counsel admits, in his brief:

> "It thus clearly appears that in Germany as in the United States, the improvements which Berliner describes in the construction of the details of the recorder and reproducer of the gramophone were improvements upon the gramophone set forth in his early German patent, as well as in his early United States patents."

The Claim of the German Patent 53,622.

The claim of this German Patent is (R. p. 153):

> "The replacing of the two armed lever (s) protected by claim 2b of the chief patent No. 45,048

and of the recording stylus (29) protected by claim 4b of the same, by a spring (aa') carrying the stylus for the reproduction of the sound, which with the one end is made fast to the casing (cc') enclosing the diaphragm, while the other end of the same can vibrate freely, so that the vibrations communicated to the latter are carried over by means of the pin (m) connecting the spring and the diaphragm at right angles to the surface of the diaphragm."

This construction is illustrated in Figures 1 and 2 in the drawing of the German Patent (R. p. 154).

This claim shows that it is a reproducing sound box of the peculiar construction as an improvement for the chief German Patent, No. 45,048 (R. p. 132), which is said to correspond to the British Patent, No. 15,232, of 1887, shown in the drawings of Record, pp. 516, etc.

Re Berliner French Patent, No. 207,090, of July 19, 1890, for Sound Box.

The drawings of the French patent show two views of a recording sound box, Figures 1 and 2; and a reproducing sound box, Figures 3 and 4. (R. p. 131.)

Figures 3 and 4 of this French patent are for a reproducer.

The construction shown in Figs. 3 and 4, while it differs somewhat in detail from the construction shown in Figs. 1 and 2 of the German Patent, No. 53,622, yet in general construction and operation is substantially the same.

In these figures of the French patent the stylus bar or spring F is *positively mechanically* connected with the diaphragm B, as is also true in the construction shown in the German patent, so that as the stylus is vibrated laterally, it will *positively move the diaphragm in both directions.* This is not true in the construction shown in Figs. 4 to 7 of the Berliner U. S. Patent, 534,543, in suit, where the stylus bar is not positively connected and involves a very different operation.

DRAWINGS OF FRENCH PATENT TO BERLINER NO. 207,090 OF JULY 19, 1890.

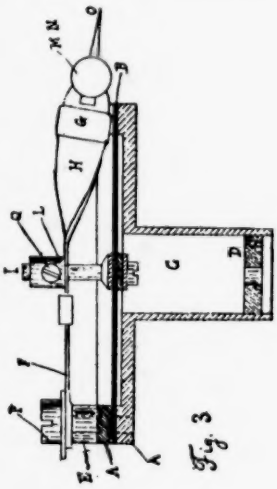


Fig. 3

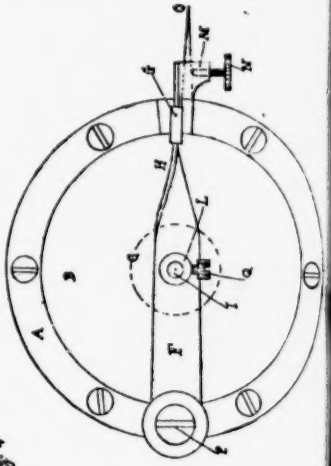


Fig. 4

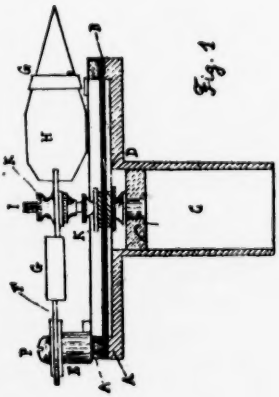


Fig. 1

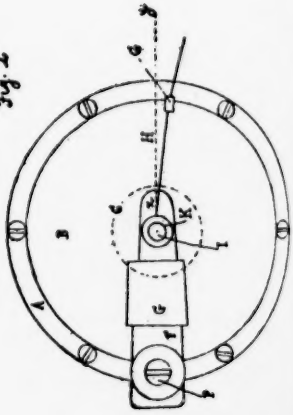


Fig. 2

Manifestly, the sound boxes illustrated and described in the German Patent, No. 53,622, and the French Patent, No. 207,090, are so materially different in construction, and in operation, from those illustrated and described in Figs. 4 to 7 of the Berliner U. S. Patent, No. 534,543, in suit, that they are not, and cannot be construed to be, the same invention, but embody different constructions invented and devised by Berliner at another time. Which invention was the better in construction, and operation, the U. S. invention or the invention shown in the foreign patents, there is no evidence.

The German Patent 53,622 was filed and bears date November 20, 1889; the French Patent, No. 207,090, was filed and bears date July 19, 1890.

The U. S. Patent, No. 534,543, was filed March 30, 1892.

Not only does the U. S. Patent, No. 534,543, Figs. 4 to 7, differ materially from the French and German patents, but the French patent also differs from the German patent.

Berliner, evidently between the date of the French patent and the date of filing of the United States patent in suit, had experimented and found the improvement described in the United States Patent to be the better.

These German and French patents describe and claim only a sound box and do not include the invention of claims five and thirty-five.

The attention of the Court is called to the sheet bound at the end of this brief (a disconnected sheet having been handed up at the argument) showing comparatively the drawing of the Patent No. 534,543 in suit, and the drawings of these French and German patents.

It is Apparent That Berliner Regarded the Specific Sound Box of the German Patent, No. 53,622, and French Patent, No. 207,090, as Quite a Different Invention From the Invention, the Subject Matter of the U. S. Patent, No. 534,543, in Suit.

This is evidenced by

(1) The fact that he stated, in the oath of the subsequent U. S. application for the patent in suit (Record, p. 298 Graphophone case) "that the same has not heretofore been patented to him or to others, with his knowledge or consent in any foreign country——"

(2) By the fact that this German and French patent were stated therein to be improvements on the Berliner construction shown in the prior German patent, No. 45,048, of which it was a patent of addition, and in the prior French Patent, No. 207,090, of which it was stated to be an improvement. These prior German and French patents were set forth in the answer in the Graphophone case, and corresponded with the British Patent, No. 15,232, of November 8, 1887, also set forth in the answer.

(3) That the construction of sound box in the Berliner German Patent, No. 53,622, and the French patent, No. 207,090, differed materially from that shown in Figs. 4 to 7 of the U. S. Patent filed two to three years later, showing that Mr. Berliner in the meantime had changed the construction, as hereinbefore pointed out.

(4) The fact that the U. S. construction differed from the construction of these prior German and French patents is further evidenced by the fact that the U. S. Patent Office, in considering the Berliner U. S. application for the patent in suit, did not cite either, or any of these prior foreign *patents,* as a reference

against the claims. (See Record, Graphophone case *file* of No. 534,543, pp. 275 to 319.)

In the case of the Welsbach Light Co. *v.* Rex Incandescent Co., 94 Fed. Rep., 1006, Judge Lacombe, in deciding that the foreign patent was not identical with the U. S. Patent, said:

> "That he (the inventor) himself, regarded the two processes as involving different inventions is apparent from the history of the abandoned application for United States patent——"

Judge Lacombe also decided in that case:

> "What Welsbach disclosed in those earlier patents was a subsidiary treatment, which lay closely within the lines of his original invention——"

The most that can be contended for in this case by the defendants, is that the sound box of the German and French patents was for a subsidiary detail of improvement.

It is respectfully submitted, even if the said sound boxes of the German and French patents were the same as shown in Figs. 4 to 7, of the U. S. patent, that the prior patenting abroad of a **minor detail**, described and claimed in the subsequent United States Patent, does not and cannot and never was intended to operate to invalidate the **principal invention** of the patent, and that any such contention is contrary to the letter and spirit of Section 4887, and contrary to the decisions of this Court and the other Federal Courts, interpreting the said Statute. It is, therefore, desired now to consider the authorities and fallacy of the defendant's position upon this point.

Defendant's Contention Based on a False Premise.

The defendant, in substance, contends that a patenting in a foreign country of a **part or detail** of an invention contained in a U. S. Patent prior to the U. S. Patent forfeits the whole U. S. Patent at the expiration of the foreign patent. In other words, that the prior patenting abroad of a specific form of a detail of construction which might be used or employed in carrying out the principal invention would operate to invoke the statute, if the home patent should happen to contain a claim for such specific detail.

We submit that even if the sound boxes patented in Germany and France had been the same as the sound boxes illustrated and described in Figs. 4, 5, 6 and 7 of the patent in suit, that the patenting of these details or subsidiary portions of the patent in suit, No. 534,543, in a foreign country prior to the U. S. Patent could not possibly forfeit the U. S. Patent.

A different proposition might be maintained if the device patented in the foreign country, instead of being small details of the U. S. Patent and a subsidiary portion, had been the broad, main invention of the U. S. Patent, in addition to the minor improvements, and the suit had been upon a detailed minor improvement.

There is a very marked difference between such propositions.

The invention of the patent in suit, No. 534,543, as adjudicated by the Court of Appeals, is the **broad, main invention,** consisting of the traveling tablet having a sound record formed thereon, and a reproducing stylus shaped for engagement with the record free to be vibrated and propelled by the same across the face of the record, and the method for accomplishing the same.

The detail construction of the sound boxes illustrated and described in Figs. 4, 5, 6 and 7 was clearly subsidiary. Any suitable construction of sound box could be used carrying out the broad invention.

Defendant's counsel also makes a strenuous effort in order to show a relation between this German Patent and claims five and thirty-five, to put upon these claims a limited interpretation at variance with the decision of the U. S. Circuit Court of Appeals in the Graphophone Case, so that it may be made to appear that claims five and thirty-five related to the wedge-shaped stylus of this reproducing sound box, and did not relate to the automatic simultaneous method of vibrating and propelling the stylus by and through the medium of the record across the face of the record disc. (See defendant's brief, attached to the petition in this case, pp. 42 and 43.) He, however, makes no reference to claim thirty-two in this connection, which calls for a reproducing stylus having a wedge-shaped point engaging the walls of the record groove.

Several minor detail claims of the patent in suit, 534,543, probably embody the elements and features of the sound box illustrated and described in the said German Patent, 53,622, and French Patent, 207,090, but complainants contend most emphatically that the **broad principal invention** of claims five and thirty-five is nowhere illustrated, described or claimed or in any wise hinted at, in either of these German or French patents, and that under the law as understood from the authorities even if a prior foreign patent may contain certain detail features which happen to be embodied in a subsequent U. S. Patent for a broad generic invention, the essential features of the **principal** invention of the said U. S. Patent cannot be affected by the expiration of the foreign patent. As stated by Judge Townsend, in granting the motion in the Court below:

> "In fact, the interpretation placed by the Courts upon the decision of the Supreme Court in Siemans *v.* Sellers, *supra*, seems to be that the test is whether the *principal* invention of the domestic patent is found in the foreign patent." (R. p. 323, Fol. 969.)

CONSIDERATION OF THE AUTHORITIES.

Siemens, et al., v. Sellers, et al., 123 U. S. 276.

The defendants have cited and seem to rely, in support of their contention in this regard, upon the case of Siemens, *et al., v.* Sellers, *et al.,* 123 U. S. 276.

The *facts* in this case are essentially and substantially different from the facts of the case at bar. In the Siemens case the main invention was illustrated, described and claimed in the prior British Patent. On this point the Court said, in an opinion by Mr. Justice Bradley:

> "As to the first question we have carefully compared the two patents, the English and American, and can see no essential difference between them. They describe the same furnace in all essential particulars. The English specification is more detailed, and the drawings are more minute and full; but the same thing is described in both. There is only one claim in the English patent, it is true. Bnt that claim, under the English patent system, entitled the patentees to their entire invention, and is at least as broad and comprehensive as all four claims in the American patent."

There is nothing in that case which is authority for defendant's proposition that, if a minor feature of the U. S. patent happens to be patented abroad before the U. S. patent separately and independently of the main feature of the U. S. patent, that the expiration of that patent forfeits the entire U. S. patent. Such a proposition is absolutely contrary to the intent of Sec. 4887, and has no support in any of the authorities.

Mr. Justice Bradley, in the Siemens case, based his opinion manifestly upon the fact that the "*principal invention is in both patents.*"

He did say that, if the American patent contained additional improvements, that is, outside of the "prin-

cipal invention," that "this fact cannot save the patent from the operation of the law."

It is by no means a fair assumption that Justice Bradley meant to say that the prior patenting abroad of any isolated detailed feature of a U. S. Patent would forfeit the principal invention.

Mr. Justice Bradley's opinion throughout is based upon the question of whether, or not, the *principal invention* was previously described and claimed in the prior English patent, and he found that it was.

Defendant's Counsel Appears to Rest His Whole Contention in This Connection Not Upon the Spirit of the Decision of Siemens v. Sellers, but Upon a Misconstruction of a Short Sentence by Justice Bradley, viz., "a Patent Cannot be Construed as Running Partly From One Date and Partly From Another."

Defendant's counsel predicates his whole argument relative to this branch of the case upon these few words of Mr. Justice Bradley, which he adopts as his text, and attempts to construe and to carry to an extent which Justice Bradley obviously never intended.

As pointed out by the Court of Appeals in Westinghouse *v.* Stanley Improvement Company, 138 Fed. Rep., 623, *there has been too much tendency to misinterpret this decision.*

In Siemens *v.* Sellers the prior English patent, which the Court held limited the term of the U. S. Patent, described the same regenerative furnace in all essential particulars, and the claim of the English patent, as stated by the Court, entitled "the patentees to their entire invention, and is at least as broad and comprehensive as all four claims in the American patent."

It is obvious that that decision was authority for

the proposition that, where the **principal** invention is contained in both patents, the American patent will be limited to the term of the prior foreign patent.

It is equally obvious, and true, we submit, that it is authority for the converse proposition that the foreign patent, in order to come within the statute, Section 4887, *must contain the principal invention of the U. S. patent sought to be curtailed thereby.*

As appears by the decision in that case the original patent was issued while the Act of 1839 was in force, which, as cited by Mr. Justice Bradley,

> "allowed a patent to be taken out here at any time after the inventor had taken out a patent for the same invention in a foreign country, provided it should not have been introduced into public and common use in the United States prior to the application for a patent here; AND *provided also,* that in all cases every such patent shall be limited to the term of fourteen years from the date or publication of such foreign letters patent'."

Justice Bradley also pointed out the subsequent legislation, comparing it with the Act of 1839, which provided, under such circumstances, that the American patent should *expire* at the same time with the shortest term foreign patent. The Court also stated:

> "We are of the opinion, therefore, that the condition imposed by the Act of 1839, that the term of a patent for an invention which has been patented in a foreign country shall commence to run from the time of publication of the foreign patent, was not repealed or abrogated by the Act of 1861——"

It is clear, therefore, what Mr. Justice Bradley had in mind when he made this statement upon which the defendant's counsel has laid so much stress, viz:

"A patent cannot be exempted from the operation of the law by adding some new improvements to the invention; and cannot be construed as running partly from one date and partly from another."

The Court evidently meant that as the principal invention was shown in both the foreign and domestic patents, the adding of certain additional detail improvements to the American patent could not allow it to be "construed as running partly from one date and partly from another." It will be noticed that the word "and" is used in the sentence, and that, therefore, a fair interpretation may be that this conjunction "and" joins the second portion of the sentence to the first.

Further, even if the statement referred to is a disconnected statement, it was an *obiter* of the Court which was not necessary to the facts of the case, as the principal invention was found in both; and,

Further, under the Act of 1839, under such circumstances the U. S. patent *ran for fourteen years from the date of the prior foreign patent;* for instance:—claims for the detail improvements in the American patent, not described in the foreign patent, would run from March 1, 1864, the date of the original U. S. patent, while the claims for the principal invention would have been running for fourteen years from the date of the prior English patent.

This running from different dates might lead to some confusion, as suggested by Justice Bradley, but the law was subsequently changed by Section 4887 of the Revised Statutes, which tended to correct any such confusion arising in such cases, so that under all circumstances *the date from which the patent ran would be the same date,* the date of the U. S. grant, so that the inventions of the claims such as were patented in a prior foreign patent would expire with the term of the foreign patent having the shortest term to run.

Under the Laws of the U. S. the Failure of Some of the Claims Does Not Invalidate the Entire Patent.

This, therefore, places the claims of the U. S. patent regarding validity, or invalidity, by reason of the expiration of a prior foreign patent, upon the same basis as the declaration of a Court as to the invalidity of one, or more, claims of a U. S. patent, by reason of proof of ANTICIPATION of such claims. Under the laws of this country, the remaining claims unanticipated continue to exist for the term of seventeen years from the date of the patent.

Under the laws of this country, one of the objects of allowing a multiplicity of claims in a single patent is to preserve to the inventor his substantial rights for the thing which he invented, even though a part, such as he may have claimed in other claims, may have been found to be invalid. His rights, therefore, to the principal invention, or to such parts of his invention, claimed in claims which remain unanticipated, are still preserved to him.

This theory of the law is as equally applicable to such claims of his invention as may have been patented previously abroad.

This is in thorough accord with the letter and spirit of Section 4887.

The intent of the Act is that the prior patenting abroad shall not debar a person from receiving a patent in this country; the statute so specifically states; and starts out with that statement:

> "**No person shall be debarred** from receiving a patent for his invention or discovery, nor shall any patent be declared invalid, by reason of its having been first patented or caused to be patented in a foreign country—"etc.

The Act, later, goes on to state:

"But every patent granted for an invention which has been previously patented in a foreign country shall be so limited as to expire at the same time with the foreign patent, or, if there be more than one, at the same time with the one having the shortest term——"

This does not mean that an invention which may be contained and claimed in the U. S. patent, but not embodied or incorporated in any prior foreign patent, shall run for a less period than seventeen years.

Therefore, it is obvious that the main invention of a domestic patent cannot be invalidated, under our system of claims, by the mere fact that some detailed minor specific form, separately claimed in a United States patent, has previously been patented abroad.

CONSIDERED FURTHER.

The Act says "*an invention.*" Under our system of patenting, each claim, for the purposes under consideration, is practically a separate invention.

The Court said in United Nickle Co. *v.* California Electrical Works, 25 Fed. Rep., 475,479:

"Each claim is in effect a separate and distinct patent."

Gage *v.* Herring, 107 U. S. 640, 646;
Leggett *v.* Standard Oil Co., 149 U. S. 287, 293.

The Supreme Court stated in Carlton *v.* Bokee, 17 Wall, 463, 472:

"One void claim, however, does not vitiate the entire patent."

And, again, in Russell *v.* Place, 94 U. S., 606, 609:

> "A patent may be valid as to a single claim and not valid as to others."

And Judge Wallace said in Celluloid Mfg. Co. *v.* Zylonite Brush & Comb Co., 27 Fed. Rep. 291, 294;

> "Each claim of a patent covers a complete invention, and is, in substance, an independent patent."

CONSIDERED IN ANOTHER LIGHT.

It is further submitted that even if defendant's contention and construction of Section 4887 were true, the prior patenting of a minor detail of the invention in a foreign country should not affect the term of the **principal** invention of the U. S. patent, for the reason that if the contention just advanced regarding the patent system of this country as to separate claims be not true, the prior patenting of a *part* of an invention in a foreign country would not be previously patenting abroad *the invention.*

The Statute says, "every patent granted for an invention which has been previously patented in a foreign country—" etc. If, under this interpretation, a single U. S. patent is to be regarded as containing but a single invention, then the patenting in a prior foreign patent of a detail part of the invention is not a prior patenting abroad of the invention. The Act says, "any patent granted for an invention."

If this is to be understood as meaning that there is but one invention in a domestic patent, then, as before stated, the prior patenting abroad of a minor or detailed part of that invention is not a prior patenting abroad of the invention of that domestic patent. At most, it is the prior patenting only of a part of an invention.

It cannot be construed to be the patenting abroad of the principal invention or the essence of the invention.

This apparently is the dominating thought which has influenced the Courts.

Therefore, under this construction, in order to bring a domestic patent within the terms of Section 4887, the whole or principal invention of the domestic patent must have been previously patented abroad.

The Statute manifestly contemplated the principal or essence of the invention, not a minor part.

On the other hand, however, if the other construction be given to the Statute, that under the U. S. system **each claim** contains practically a **separate invention**, then those claims, the subject matter of which has been previously patented abroad, can only be affected by the expiration of the prior foreign patent.

As hereinbefore pointed out, the defendants have not produced a single decision where the Court, under such circumstances, has held a U. S. patent to have expired for the principal invention.

Such an inequitable rule contended for by defendant's counsel, is contrary to the theory and policy of the patent system of this country, and if carried out, would strike at the very foundation of the system.

This theory might pertain with more force in England, and perhaps some of the continental countries, where a patent, bad as to one claim, is invalid as to all. The policy of this country, however, is diametrically opposed to such theory, and allows each claim to stand or fall, independently of the other claims.

> "Every reasonable doubt relevant to any such question should be resolved in favor of the patent, for the law does not favor forfeiture."

Pitt *v.* Hall, 2 Blatchf. 238;
McCormick *v.* Seymour, 2 Blatchf. 256;
Brown Cork & Seal Co. *v.* Aluminum Stopper Co., 108 Fed. Rep. 850;
Walker on Patents, Sec. 108 (4th Ed.)

Defendant's Contention That the Patenting of a Minor Detail in a Foreign Country Previous to the Patenting of the Broad Generic Invention in the United States Forfeits the United States Patent as a Whole, is Contrary to the Letter and Spirit of Sec. 4887.

This is shown by the authorities heretofore cited. Section 4887 says:

"But every patent granted for an invention which has been previously patented in a foreign country shall be so limited——"

This brings us to the question of what is *the invention* of the patent in suit.

What is the Invention of the Patent in Suit?

This Court of Appeals has decided this, and has held that it is the invention specified in claims five and thirty-five.

To now forfeit this patent because of the previous patenting of a minor detail abroad—if such was the case—would be to say that that detail of the sound box was *the invention* of the patent and practically overruled the decision of the Court of Appeals as to what was the invention of the patent.

Any doubt regarding the construction and application of this Statute should be resolved in favor of the patent.

The Court of Appeals for the First Circuit, in

Westinghouse Electric Co. *v.* Stanley Improvement Co., 138 Fed. Rep. 823, has pointed out how the case of Siemens *v.* Sellers, 123 U. S. 276, has been misinterpreted, and referring to the fact that the tendency should be, especially in view of the repealing of this old law, to relax rather than extend the interpretation beyond its letter. (See page 827.)

This Westinghouse case also points out that there has been too much of a tendency to misinterpret this decision in the case of Siemens *v.* Sellers, and says:

> "The petitioner especially relies on what is said near the foot of page 194 of 135 U. S. page 724 of 10 Sup. Ct. (34 L. Ed. 88), that the test is whether, if a person in the United States, after the issue of the United States Patent, should commence the manufacture of a patented article by the precise process described in the foreign patent, the Court would properly restrain him. To begin with, this, as already said, is a mere quotation from the opinion of the Circuit Court, and not an expression devised by the Supreme Court; and it is not to be assumed that where an appellate tribunal, as in this case, quotes long extracts, it is held to be bound by all the expressions contained in them."

The fact is that Siemens *v.* Sellers is to be understood as deciding the case before it, and that all that case really did decide was that as the "*principal invention*" was previously patented abroad, that the United States Patent expired with the foreign patent.

This decision did say that the fact that some "new improvements to the invention" were added to the U. S. Patent, would not save it. We do not contend to the contrary.

Re Invalidating Certain Claims, and Not Others.

We strenuously contend that the Supreme Court, when it said that a patent "cannot be construed as running partly from one date and partly from another,"

did not mean to say that the invalidating of a minor claim by the expiration of a prior foreign patent would invalidate the whole U. S. Patent.

This is contrary to the doctrine of interpretation of United States Patents.

The anticipation, or invalidating of one claim of the U. S. Patent does not by any means according to the well-settled authorities, invalidate the whole patent. This may be true in England, but not in the United States.

There is really no reason why a single claim invalidated by the expiration of a foreign patent should invalidate all the other claims with which the foreign patent had nothing whatsoever to do.

There is no more reason for this than there would be that all the claims of the U. S. Patent should be invalidated because a single claim should be found to be anticipated.

The construction which the defendant seeks to put upon this case that the patenting of a minor detail previously abroad invalidates the broad invention of the subsequent U. S. patent, is contrary to the spirit, as well as the letter, of Sec. 4887, and is contrary to all the authorities regarding the interpretation of the claims.

Sawyer Spindle Co. *v.* Carpenter, 133 Fed. Rep. 238, though it did not decide, it assumed, for the sake of argument, that a patent may be limited in the term by a foreign patent as to some of its claims, and not as to others.

Therefore:

Even if the detailed construction of the sound box of Figs. 4 to 7 of the U. S. patent had been previously patented in the German and French patents, which is not admitted, there is no warrant in the authorities, we submit, under the circumstances of this case to invalidate the *principal invention* of the U. S. patent in suit.

Not one case has been cited by the defendant where the substantial invention of the patent has been declared forfeited by reason of the prior patenting in a foreign country of a minor detail.

In all the authorities, however, which have been considered where it was held that the prior foreign patent limited the domestic patent, the *substantial invention* of the U. S. patent had been patented in the prior foreign patent, or the *invention* of the foreign patent has been so nearly like the *substantial invention* of the U. S. patent as to render them practically one and the same.

Where they have not been substantially one and the same, the defence has failed.

Aquarama Co. *v.* Old Mill Co., 124 Fed. Rep. 333;

Welsbach Light Co. *v.* Rex Incandescent Co., 94 Fed. Rep. 1006;

Electric Accumulator Co. *v.* Brush Electric Co., 52 Fed. Rep. 130.

See also

Westinghouse Electric Co. *v.* Stanley Instrument Co., 138 Fed. Rep. 823.

Is the principal invention of the domestic patent found in the foreign patent? Is the subject matter of one the same in all essential particulars as that of the other?

These were the main tests applied in Siemens *v.* Sellers, 123 U. S. 276.

See also

Accumulator Co. *v.* Julien Electric Co., 57 Fed. Rep. 605;

Robinson on Patents, Vol. 2, Sec. 623, says:

"In order that the term of the foreign patent may thus limit that of the domestic patent, it is essential that the inventions covered by the two patents should be identical."

In this connection, Judge Townsend, in delivering the opinion of the Circuit Court, said (R., p. 323):

> "I fail to find in the numerous cases cited by counsel any authority for the proposition advanced by defendant that if an article made according to the description of the prior foreign patent would infringe any claim of the American patent no matter how insignificant, then the two patents are for the same invention and the American patent expires *in toto* with the prior foreign patent. In fact, the interpretation placed by the Courts upon the decision of the Supreme Court in Siemens *v.* Sellers, *supra*, seems to be that the test is whether the principal invention of the domestic patent is found in the prior foreign patent."

The same strict requirement recognized by the authorities as to **anticipation** by a prior patent or publication under Sec. 4886, requiring exact description of the patented thing claimed, should be observed in construing Sec. 4887.

We submit that there should be no doubt as to the complainants' contention.

ADDITIONAL AUTHORITIES CONSIDERED.

Western Electric Co. v. Citizens' Tel. Co., 106 Fed. Rep. 215.

This case is a decision of Judge Severens, of the Michigan Circuit, following the decision of Siemens *v.* Sellers, *supra.*

The decision of this case incorporates a considerable portion of one of the foreign patents to show that "the essence of the patent in suit" was contained in the expired foreign patent. The patent was for improvements in telephone exchange system and apparatus, and while the foreign patents differed somewhat in the description from the home patent, it con-

tained the "essence of the patent in suit." The Court said:

> "**But, what is more directly to the point,** the **essence** of the patent in suit contained in the first claim thereof, namely, the cutting out of the annunciator from the circuit employed for conversation, is embodied in the description of the invention in the foreign patents. The construction given in the specifications necessarily involves it. The case is, therefore, brought under the operation of the rule laid down in Siemens' Adm'r *v.* Sellers, 123 U. S. 276, 8 Sup. Ct. 117, 31 L. Ed. 153, even though it be conceded that there are differences in some details between the foreign and the home patents upon which independent claims might be based."

It is, therefore, clear that the conditions of this last mentioned case were the converse of the conditions of the case at bar, even supposing Figs. 4, 5, 6 and 7 to have been in the German and French patents, which they were not.

It is not fair, therefore, and there is no warrant for assuming, as the defendant does, that when the Court in this latter case, as in the Siemens case, referred to a patent expiring in parcels, that it meant to support the defendant's contention. In both cases the main and substantial invention was patented abroad. In the case at bar what was adjudicated by the Court of Appeals to be the main and substantial invention, or "the essence of the patent in suit," has not been patented abroad.

The citation from the Federal Statutes Annotated, Vol. 5, p. 470, cited in defendant's brief (p. 58), attached to its petition for *certiorari,* is based upon the case of Siemens *v.* Sellers, hereinbefore considered, and the statement contained can be construed as no broader than the decision of Siemens *v.* Sellers. None of the other decisions cited go any further, nor do they support the defendant's contention in this case.

Commercial Mfg. Co. v. Fairbank Canning Co., 135 U. S. 176.

In this case also the principal invention of the U. S. patent was previously patented in certain foreign countries, among them Bavaria and Austria. It was a process for treating animal fats. The complainants contended that the subsequent U. S. patent differed in various respects from the invention patented abroad. The foreign patent purported to be for the basic, broad invention, and the Court held that it was. It also held that the features of differences in the American patent were "purely wholly differences in degree."

It is, therefore, evident that a very different condition of facts existed in this case of the Commercial Manufacturing Company *v.* Fairbank Canning Co., and that the statements of the Court had application to these conditions, which do not exist in the case at bar.

According to the defendant's contention and interpretation of the authorities, if a peculiarly shaped arm for attaching certain parts to the receiver of preferable construction, had been previously patented in Germany and claimed in the Bell Telephone U. S. patent, the broad claims for the basic invention of the U. S. patent for the transmission of speech would have expired with the expiration of the foreign patent for the peculiarly shaped arm.

There is nothing in any of the authorities to warrant such an interpretation of Sec. 4887.

Clark v. Wilson, 28 Fed. Rep. 95.

This case is also cited by the defendant. It appears that the claims of the U. S. patent in that suit were the same claims as in a prior English patent which had expired, which illustrated and described the same invention as in the U. S. patent for improvement in

Corrugated Metallic Rolling Shutters. The Court, in the decision of Judge Wheeler, said:

> "The question on this provision of the Statutes is whether the invention patented in this patent is the same as that patented in the English patent. The only thing added is the fastening of the strips, before fastened at the ends, at such intermediate points as should be required. This was such an obvious thing to do, to avoid their 'rucking up,' which the inventor testifies would prevent the operation of the device, as not to appear to amount to any real invention by itself."

Judge Wheeler found that the substance of the invention was patented in the English patent prior to this patent, and that the claims were substantially the same.

Holmes Electric Protective Co. v. Metropolitan Burglar Alarm Co., 33 Fed. Rep. 254.

This case, cited by the defendant, we submit is not in point. It turned almost wholly upon the question of abandonment, and Judge Coxe's decision practically included no consideration of this question of identity and forfeiture by reason of the expiration of the prior foreign patent. His only reference is at the conclusion of the opinion, where he refers to Insurance Co. *v.* Sellers, 8 Sup. Ct. Rep. 117. Judge Coxe, here in quoting from the decision, has italicized the statement:

> "*The principal invention is in both;* and if the American patent contained additional improvements, this fact cannot save the patent from the operation of the law which is invoked, if it is subject to that law at all."

Judge Coxe by this statement evidently understood Justice Bradley's decision in Siemens *v.* Sellers to mean that the *principal invention* must be found in both patents.

Accumulator Co. v. Julien Electric Co., 57 Fed. Rep. 605.

This case is cited by the defendant. It is a decision of Judge Coxe in the Circuit Court. The facts are materially different from the facts in the case at bar. The invention was for secondary batteries, and Judge Coxe found that the *principal invention* was clearly embodied in the prior Spanish patent for the product.

It is submitted that the decision of Judge Coxe is favorable to the complainants in this case, in that it, in substance, holds that the *principal invention* of the U. S. patent must be in the foreign patent in order to anticipate. He says:

> "In the leading cases of Siemens' Adm'r *v.* Sellers, 123 U. S. 276, 8 Sup. Ct. Rep. 117, and Commercial Manuf. Co. *v.* Fairbank Canning Co., 135 U. S. 176, 10 Sup. Ct. Rep. 718, the Supreme Court has made the test of identity to depend upon the following propositions. Is the *principal invention* of the domestic patent found in the foreign patent?"

And then refers to other tests.

J. L. Mott Iron Works v. Henry Co., 80 Fed. Rep. 516.

In this case, cited by the defendant, it appears that the inventor had invented a construction of balanced float attached to the valve spindle of an outlet in closet constructions, and had previously patented substantially the same thing in Canada, as in the later U. S. patent in suit. The principal invention in the U. S. patent was patented in the Canadian patent. Judge Wheeler said:

> "*The identity of invention patented required by the statute is of material substance, and does not extend to minor details,*" citing Siemens *v.* Sellers, 123 U. S. 276.

This case supports the complainants' contention that the doctrine of Siemens *v.* Sellers "*does not extend to minor details,*" such as the specific construction of sound box of Figs. 4 to 7, but has reference to cases where the principal invention, such as claims five and thirty-five were found in the foreign patent.

The case of Oval Co. *v.* Sandy Co., 60 Fed. Rep. 295, cited by the defendant, appears to have no bearing upon the question.

Williams Co. v. Miller Co., 108 Fed. Rep. 967.

In this case, cited by the defendant, the prior British patent covered two other patents of the patentee, and included *the whole invention of the U. S. patent in suit.* This, therefore, has no bearing upon the proposition before us.

Aquarama Co. v. Old Mill Co., 124 Fed. Rep. 229.

This case is cited by the defendants, but practically supports the complainants' contention that the prior foreign patent, in order to limit the U. S. patent, must be for the principal invention of the U. S. patent. It also supports the complainants' contention that as between the sound boxes illustrated and described in the U. S. and in the French and German patents, there are differences which are important and occasion a difference in operation. The British patent in the Aquarama case differed in that the longitudinal partition in the Pleasure Canal in the U. S. patent extended through the center to the ends, dividing the canal entirely, while in the British patent it was left open at each end, *which made a material difference.*

Mr. Hicks, defendants' counsel, criticises this decision and contends that the question decided was not fully argued, though we submit this statement of coun-

sel should go for nothing, as there is no evidence to support this statement.

We agree with Mr. Hicks, however, in his statement that Judge Thomas did not hold contrary to the decision of the Supreme Court in Siemens *v.* Sellers, which latter decision merely held, in substance, that where the *principal invention* of the U. S. patent is previously patented abroad, the U. S. patent is limited.

It is submitted that the case of Miller *v.* Eagle Manf. Co., 151 U. S. 186, has no bearing upon the present case.

Sawyer Spindle Co. v. Carpenter (Circuit Court), 133 Fed. Rep. 238.

This case is a decision of Judge Brown, of the Rhode Island Circuit. In this case the Court did not decide the proposition raised that,

> "Though the patent in suit may have expired as to four of its claims, it may still exist as a valid patent for the invention of the fifth claim."

but said,

> "But assuming, for the argument only, that a patent may be limited in term by a foreign patent as to some of its claims, and not as to others, that it may expire in part and survive in part—it would still seem impossible that a single *claim* should in part expire and in part survive."

And the decision in the case was on this latter proposition.

Sawyer Spindle Co. v. Carpenter (Court of Appeals), 143 Fed. Rep. 976.

This is the decision on appeal in the preceding case and the opinion by Judge Lowell, written for the Court

of Appeals of the First Circuit, leaves no doubt but that the Court was clearly of the opinion that if the fifth claim of the patent in suit had not been substantially identical with the claims of the British patent, the Court would not have held that the American patent was limited by said British patent, although it was admitted that the first four claims of the American patent were substantially identical with the first four claims of the British patent, and that said first four claims of the American patent had expired with said British patent.

After briefly stating the facts of the case, and pointing out that the date of the British patent was prior to that of the American patent and had expired, the opinion states:

> "The first four claims of the patent in suit are admitted to be substantially identical with the first four claims of the British patent, and to have expired with them."

If the Court of Appeals in this case had considered the law to be that if any of the claims of the American patent are for the same invention as any of the claims of the British patent, the American patent expires *in toto* upon the expiration of the British, it would not have been necessary for said Court to go into an exhaustive and minute comparison of the fifth claim of the American patent in that suit, to determine whether that was identical with the invention of the British patent, as such an inquiry would have been unnecessary. But the Court's action in that case, after stating that only the fifth claim of the American patent was in suit in that case, and then stating that it was the complainant's contention that that fifth claim differed from any claim in the British patent in carefully comparing in detail the elements of that fifth claim with the subject-matter of the claim of the British patent, and in point-

ing out in detail where the subject-matter of this claim five was substantially identical with the claims of the British patent, leads inevitably to the conclusion that the said Court of Appeals of the First Circuit considered that if this fifth claim of the American patent was not substantially identical with the invention of the claims of the British patent, that said American patent in suit could have been sustained as to the fifth claim, although claims 1 to 4 of said American patent were admitted to be substantially identical to the claims of the British patent, and to have expired with the latter.

And so it is with all the decisions which have been brought to our notice. The Courts have carefully and critically compared the claims of the American patent in suit with the prior foreign patent, to determine whether the subject-matter of the claims in suit were substantially identical with the foreign patent, notwithstanding the fact that there was no dispute that other claims of the American patent were substantially identical with the foreign patent. In all these cases the Courts have gone to the time and trouble to determine the identity, or lack of identity, between the claims of the American patent in suit, and the subject-matter of the foreign patent, and throughout all these decisions we see that the underlying rule is that the foreign patent, to limit a later U. S. patent, must contain the principal invention or the essence or essential features of the American patent, and that reading Siemens *v.* Sellers, *et al.,* and Commercial Co. *v.* Fairbanks, as indicated by Judge Putnam in Westinghouse E. & M. Co. *v.* Stanley Co., 138 Fed. Rep. 823, we find that the tests referred to by the Supreme Court were tests that were sufficient for the cases then under consideration, and that, being sufficient, it was unnecessary to set any qualification with reference thereto, but that in other cases, where the conditions were entirely

different, the test was not sufficient and the rulings in Siemens *v.* Sellers and Commercial Co. *v.* Fairbanks were so interpreted and applied by the said Circuit Court of Appeals for the First Circuit.

Westinghouse Co. v. Stanley Co., 138 Fed. Rep. 823.

While this case is cited by the defendants, a reading of the case will show that it is quite in accord with the complainants' contention that the Rev. Stat., Sec. 4887, was not intended to be so broadly construed as to occasion the forfeiture of the principal invention of a subsequent U. S. patent by reason of the expiration of a prior foreign patent, which happened to claim only one minor detailed feature of the U. S. patent. This Westinghouse case is a decision of the Court of Appeals of the First Circuit, by Judge Putnam. This is one of the later cases, and the Court considers the error of the prior tendency of some of the cases to extend the meaning of the Statute, Sec. 4887. The Court says:

> "These positions find no support in the natural reading of Section 4887 of the Revised Statutes; and the provisions of this section are too severe, as apparent to the ordinary comprehension, and as has been since declared by Congress by its amendments thereto, to justify any relaxation which would extend it beyond its letter. No authorities can be found to sustain the petitioner on this point, unless it is an expression in Walker on Patents (4th Ed., 1904), 150. The learned author there cites as authority for the proposition Commercial Company *v.* Fairbank Company, 135 U. S. 194, 10 Sup. Ct. 718, 34 L. Ed. 88, already referred to, as also does the petitioner; but a careful examination of that decision fails to disclose any justification for assigning to it such an effect. In view of the fact that the learned author is discussing an obsolete statute it is not at all strange that he nodded. On the other hand, Robinson on Patents, in Sec. 623, reiterates the natural reading of the

Statute, as follows: 'In order that the term of a foreign patent may thus limit that of the domestic patent, it is essential that the inventions covered by the two patents should be identical.' It will be noticed that the author uses the word *'covered,'* and not *'shown'* or *'disclosed.'* He makes his position clear by his note to this section, wherein he cites a decision that the foreign patent is not effective *unless the claim,* as well as the patent itself, *describes the same invention.''*

IF THE PRINCIPAL INVENTION OF THE SUBSEQUENT UNITED STATES PATENT IS NOT DESCRIBED OR CLAIMED IN THE PRIOR FOREIGN PATENT THE PRINCIPAL INVENTION CANNOT FORFEIT.

This proposition is in strict accord with the doctrine of Siemens *v.* Sellers, 123 U. S. 276, upon which most of the cases rely.

Judge Putnam further considers what was intended to be decided by Siemens *v.* Sellers, and the tendency of counsel for defendants, in many cases, to strain and misconstrue what was intended. He shows that the Supreme Court did not intend that all the defences referred to could be applied to all cases irrespective of the conditions—a test regarding the scope of claims, etc. The Court says:

> ''A test of this character is too dangerous unless applied to the circumstances of the particular case in which it is used.''

Judge Putnam also considers carefully the question of ''identity,'' and what the Supreme Court meant. The Court said:

> ''The petitioner maintains that, on the question of identity of the patent, this claim falls within the decision of the Supreme Court to which we have referred; but we do not so understand it. These were based on the proposition that a difference in mere detail does not avoid identity.''

Appellant's counsel seeks to find in the decision of the Supreme Court, in Commercial Manufacturing Co. *v.* Fairbank Co., 135 U. S. 176, an iron-clad rule for all cases wherein is involved the question as to the expiring of United States patent, by reason of the expiration of a prior foreign patent, that is to say, to make the following test:

Were a person in this country after the issue of the American patent to manufacture the article described in the foreign patent, supposing that the article had not been patented abroad, would the courts refuse an injunction to restrain the use of the article, on the ground that it infringed that covered by the American patent?

But the Circuit Court of Appeals, for the First Circuit, in Westinghouse E. & M. Co. *v.* Stanley Instrument Co., 138 Fed. Rep. 823, has explained and interpreted Siemens *v.* Sellers, *supra,* and Commercial Co. *v.* Fairbank Co., *supra,* and explains that these decisions are not to be taken as making such a broad and general rule, but are to be construed in connection with the particular facts connected with each case, as the following quotation from the decision of Judge Putnam, in Westinghouse E. & M. Co. *v.* Stanley Instrument Co. clearly discloses:

> "The petitioner relies on Siemens *v.* Sellers, 123 U. S. 276, 8 Sup. Ct. 117, 31 L. Ed. 153; but that case, so far as it touches the present question, discusses merely the identity of what was in fact patented. This is emphasized at page 283, of 123 U. S., page 119, of 8 Sup. Ct. (31 L. Ed. 153), where the Court carefully explains the claim in the English patent, and not merely what the patent disclosed. The same observation applies generally to Commercial Company *v.* Fairbank Company, *supra,* which is also strenuously relied on by the petitioner. The discussion in the opinion in the last case cannot be said to par-

ticularly bind the Court, because it was carried out for the most part by simply making long extracts from the opinion passed down in the Circuit Court; but, at the foot of page 188, of 135 U. S., page 722, of 10 Sup. Ct. (34 L. Ed. 88), it speaks of the question of the identity of one foreign patent with the patent then in suit. What has this to do with what is merely disclosed by either one patent or the other? The petitioner especially relies on what is said near the foot of page 194, of 135 U. S., page 724, of 10 Sup. Ct. (34 L. Ed. 88), that the test is whether if a person in the United States, after the issue of the United States patent, should commence the manufacture of a patented article, by the precise process described in the foreign patent the Court would properly restrain him. To begin with, this, as already said, is a mere quotation from the opinion of the Circuit Court, and not an expression devised by the Supreme Court; and it is not to be assumed that where an appellate tribunal, as in this case, quotes long extracts, it is held to be bound by all the expressions contained in them."

Judge Putnam states further on:

> "However, for that particular case, this test was a sufficient one, and it was not necessary, therefore, for the Court to state any qualifications with reference thereto. For other cases, including the one at bar, the test is not sufficient."

As shown by the foregoing quotations from Judge Putnam's decision in this case, he follows the Supreme Court in that the language of Section 4887 is "so plain and unambiguous" that there is no difficulty in reading the natural and obvious meaning of said section, as he states:

> "It is a 'patent' granted for an invention which has been previously 'patented' in a foreign country, etc., which is limited. 'It is a domestic patent against a foreign patent.'"

In other words, it is what is covered by the statute, or as he points out on page 827, in referring to Robinson on Patents, 623, "the author uses the word 'covered,' and not 'shown' or 'disclosed,'" to make it clear that the foreign patent is not effective to curtail the United States patent, unless it claims, as well as describes, the same invention, and we have seen that throughout all of the decisions, it is not an isolated detail to which the statute is directed, but it is the *principal invention,* as referred to by the Supreme Court, in Siemens *v.* Sellers, *supra,* and it is this meaning or interpretation of Section 4887, to which Judge Putnam refers when he states, on page 828:

> "Therefore we are unable to find any authority, which requires us to disregard the natural reading of Section 4887, of the Revised Statutes, and no authority which leads in that direction."

Judge Putnam also clearly states that the case under consideration does not fall within the decisions of the Supreme Court, because in those decisions of the Supreme Court, that is, Siemens *v.* Sellers, and Commercial Co. *v.* Fairbank Co., *supra,* the differences were merely of details which did not avoid identity; and it is so with practically every one of the cases cited where the courts have held that there was a limitation by the foreign patent on account of identity, because the differences were merely in detail and very minute, and in the case of the Westinghouse E. & M. Co. *v.* Stanley Co., Judge Putnam found that there was a substantial difference between the British and the American patent and that, therefore, the latter was not limited by the expiration of the former.

Bate Refrigerator Co. v. Sulzberger, 157 U. S. 1.

This case, cited by the defendants, has no bearing upon the question of identity of invention, but merely relates to the bald proposition that where the prior foreign patent is for the same invention, the subsequent U. S. patent will expire at the end of the full term of the foreign patent.

Electric Accumulator Co. v. Brush, 52 Fed. Rep. 130.

In this case it was decided by the U. S. Circuit Court of Appeals, for this Circuit, that a subsequent U. S. patent for secondary batteries did not expire with the expiration of the term of a prior Italian patent, as there was some *difference in identity* of invention. It was held that the Italian patent was designed to cover, not the main invention of the U. S. patent, but a prior construction or improvement of Mr. Brush.

It is therefore, respectfully submitted that for the various reasons heretofore set forth, that the sundry defences presented by the defendants are not material, and that, if they had been before the United States Circuit Court of Appeals in the consideration of the Graphophone case, they would not have changed the result.

Alleged German and French Patents to Berliner, Not Properly Proven by Defendant.

The attention of the Court is also particularly called to the fact that the defendant's proofs of alleged foreign patent, according to the copies submitted to the complainants, are incomplete, and were formally objected to in the Court below, viz:

Referring to the German patent, No. 53,622, of November 20, 1889, and to the French patent, No.

207,090, of July 19, 1890, certified copies of which are referred to and offered in evidence, in Mr. Hicks's affidavit (R., page 81), forming part of defendants' papers in opposition to the motion for preliminary injunction, together with translations thereof.

I beg to call the attention of the Court to the fact that the defendants have not offered in evidence certified copies of these *letters patent,* but only documents which are alleged to be copies of the *specifications and drawings* thereof.

The papers containing the alleged grant are not included. The patents themselves or full certified copies have not been exhibited.

Referring to page 126 of the Record, in opposition to motion for preliminary injunction, we find what is alleged to be a translation of the French patent, No. 207,090, but which is nothing more than a translation of the *specification.* The *grant* or the *letters patent,* which under the authorities, as hereinafter referred to, is necessary to prove the existence of these foreign patents, has not been offered in evidence. The most that has been offered in evidence is this copy of the *specification.*

So also with respect to German patent, No. 53,622, an alleged translation of which is found on page 150 of the Record, in opposition to the motion for preliminary injunction. As will be seen this is not a copy of the *letters patent* or the *grant issued by the Imperial Patent Office of Germany,* but is merely a copy of the *specification,* and does not prove, under the authorities, the existence of the German *patent.*

The same applies to the French patent, No. 186,827, of November 8, 1887 (R., p. 123); No. 190,602, of May 15, 1888 (R., p. 124), and also to German patent, No. 45,048, of November 8, 1887 (R., p. 132), and No. 47,099, of May 15, 1888 (R., p. 145), the alleged trans-

lations of these letters patent accompanying defendant's papers in opposition to motion for preliminary injunction, not being, as Mr. Hicks alleges (R., p. 81) in his affidavit "certified copies of *letters patent*" of France and Germany, respectively, since the "correct, true and full translation thereof," which are said to be attached to said defendants' papers, in opposition to this motion for preliminary injunction, are not translations of the said *letters patent,* or the *grant* from France and Germany, as before stated, but are merely alleged translations of the *specification.*

The Court of Appeals, of the District of Columbia, in the case of Rosseau *v.* Brown, reported in 21 Appeal Cases, Dist. of Columbia, page 73, in a late decision of January 20, 1903, has considered this question of proving a foreign patent, and held that the offering in evidence of

> "Only a copy of the specifications and drawings annexed to a French patent"

does not have the effect of putting the French *patent* in evidence, or, as the Court said, referring to the fact that only a copy of the *specification* and *drawings* of the French patent had been submitted.

> "The *patent* itself has not been exhibited,"

and later on in this decision, again referring to this French patent, which was sought to be placed in evidence, it is stated that:

> "As we have before stated, the French patent alleged to have been granted on July 18, 1890, has not been exhibited in evidence."

So also in the case at bar, the complainants submit, that the mere certified copies of the *specifications* and *drawings* of these alleged French and German patents are, under the authorities, plainly insufficient

to place the alleged *patents* in evidence, or to exhibit the same to the Court, and these exhibits offered on behalf of the defendants were duly and are now objected to for this reason.

RE POINT TWO.

The defendant here contends that the Berliner Patent, No. 534,543, in suit, expired before suit brought with the British Patent, No. 15,232, of November 8, 1887, on November 7, 1902, and with the German Patent, No. 45,048, of November 8, 1887, on November 8, 1902, and with the French Patent, No. 186,827, of November 8, 1887.

The defendant's second point, as stated, may be misleading and confusing, among other things, in that the second point as stated by the defendant, assumes a condition of fact which the facts show in this case do not warrant.

In order to avoid any misunderstanding it should be understood that the principal invention claimed in the home patent, such for instance, as claims five and thirty-five of the patent in suit, was not illustrated, described or claimed in any of the said prior foreign patents. In other words, the broad invention in issue in this case was entirely and absolutely omitted, or not included in any of the said foreign patents; perhaps for the very reason that the inventor did not wish to jeopardize this important invention by including it in a foreign patent to be issued prior to the issue of the patent in suit. Or, it may be, as hereinafter pointed out, that at the time these foreign applications, filed abroad November 8, 1887, were forwarded for filing necessarily some time previously, the invention now in issue had not been invented. According to the record in this case, the earliest date of this in-

vention was the date of filing of the Berliner U. S. application for patent No. 564,586, which was November 7, 1887. This statement is made preliminarily so that there may be no misunderstanding in the consideration of defendant's point 2 regarding the facts, which are hereinafter more particularly considered.

These three patents were set out in the answer in the prior Graphophone suit, though they were not used in evidence, manifestly for the very good reason that they have no bearing upon the claims of the patent in suit.

It is assumed, for the sake of argument, that the drawings of the British Patent, No. 15,232 (R. p. 516), show in Figs. 1 to 7 (R. p. 526) the same devices and constructions as shown in the drawings of the Berliner U. S. Patent, No. 372,786 (R. p. 416), and that Figs. 8 to 16 (R. p. 526) of this patent show substantially the same devices as illustrated in Figs. 1 to 9 of the Berliner U. S. Patent, No. 564,586 (R. p. 463), and that the description in the British patent, No. 15,232, describes these constructions illustrated.

It is stipulated (R. p. 540) that the drawings of the French Patent, No. 186,827, of November 8, 1887, to Berliner, and the drawings of the German Patent, No. 45,048, of November 8, 1887, to Berliner, are the same as the drawings of the Berliner English Patent, No. 15,232, and that the English drawings may be used on appeal in connection with the French and German Patents.

All References to Claims 5 and 35 Omitted From Foreign Patents and Invention Covered Thereby.

The only drawing, Fig. 10, of No. 564,586 (R., p. 465), which in any manner illustrates the apparatus or method of claims 5 and 35, of the patent in suit, is distinctly omitted from the British Patent, No. 15,232 (R.,

p. 516), and from the said French and German patents, as well as all description of Fig. 10, and any and all description of Claims 5 and 35 which was specifically embodied in the U. S. patent, No. 564,586 (R., p. 465). Neither are there any claims in any of these foreign patents, for the method, or apparatus, of Claims 5 and 35, and could not be, as there is nothing in the specification or drawings of any of these patents upon which to base such a claim.

As the drawings of the British, French and German patents are assumed to be the same, we will refer, for purposes of brevity, to the British patent only.

In order that the comparison may be clear, we submit an enlarged independent sheet which contains on the one side all the drawings of Berliner's British Patent, No. 15,232, of 1887, and on the opposite side all the drawings of the Berliner U. S. Patent, No. 564,586.

From an examination of these drawings it will be clear that the English drawings include, in addition to the drawings of the Berliner Patent, No. 372,786, *only a part* of the drawings of the Berliner Patent, No. 564,586; **they do not contain and specifically omit the most important figure, Fig. 10, of the U. S. drawings of 564,586.**

An examination of the specification of the British Patent will also clearly show that that portion of the U. S. Patent, No. 564,586, which describes Fig. 10, and describes the method of claim five of the patent in suit, No. 534,543, is entirely omitted.

Claim 9, of the British Patent, which defendant states corresponds to Claim 8, of the U. S. Patent No. 564,586, notwithstanding the strained contentions of defendant's counsel, is not for, and does cover, the

invention of Claims 5 and 35, of the Berliner patent in suit, as hereinafter more particularly pointed out.

The only disclosure of the subject matter of claims five and thirty-five of the patent in suit, No. 534,543, which was in the U. S. Patent, No. 564,586, and upon the basis of which the Court of Appeals (R., p. 73) held that claims five and thirty-five were in 564,586, namely, Fig. 10 and description thereof, was never incorporated in the foreign patents, and has been specifically omitted from them.

Fig. 10 of the Berliner Patent, No. 564,586, was the only figure in the drawings which illustrated any form of the apparatus claimed in claim thirty-five of the Patent, No. 534,543, in suit, and the only description of Fig. 10, or of any apparatus or method such as claimed in claims five and thirty-five, was contained on page 4 of Patent No. 564,586, lines 93 to 128. This Fig. 10 was omitted from said Berliner British Patent, No. 15,232, of 1887, and all that portion of the specification of the U. S. Patent, No. 564,586, just mentioned, descriptive of the apparatus of claim 35 and method of claim 5 was also omitted.

Certain other portions of the specification of the Berliner Patent, No. 564,586, were also omitted from the British Patent.

The portion of the specification which was descriptive of Fig. 10, and of the apparatus of claim thirty-five, in No. 564,586, and which was never incorporated in the British Patent, reads as follows (R. p. 469, l. 90):

> "Both the process and the apparatus thus far described may be modified in various ways without departing from the main features of my invention. So, for instance, I can dispense with the centering device and can rotate the record upon a stationary axis, if the diaphragm, with its attached stylus, is mounted in a manner to make

it follow the spiral record. An arrangement of this character is shown in Fig. 10. The reproducing disk 54 is in this case mounted as hereinbefore described, but without regard to the centering device. The support 7, may be fixed in position so that the bevel gear 9, mounted upon the same in the manner described with reference to Fig. 3, will turn without progressive motion. Bevel gear 9, and with it the reproducing disk 54, are rotated by a bevel gear 14′ upon a shaft 6′, to which power is applied by a weight, as shown, or in any other suitable manner. The diaphragm casing 31 is secured to a small truck 55 upon rails 56 arranged vertically above and parallel with a diameter of the reproducing disk, and at such height above the same that the stylus 29 will be in engagement with the undulatory grooves of even depth which represent the record of sounds.

The listener applies his ear to the ear-piece, and when the shaft 6′ is rotated the stylus and diaphragm will be forced to vibrate, as in the apparatus shown in Fig. 1, but will at the same time move with the truck 55 across the face of disk 54. A tolerably good reproduction may also be obtained by simply holding one end of a reed between the teeth and the other pointed end of the same in engagement with the record grooves while the disk is rotated."

There is absolutely nothing in the specification of the Berliner British Patent, No. 15,232, of 1887, which describes, directly or indirectly, the method of claim 5, or the apparatus of claim 35, of Patent No. 534,543, in suit.

There is absolutely nothing in the drawings of the Berliner British Patent, No. 15,232, of 1887, which illustrates, or shows the apparatus of claim 35, or anything which is operated in accordance with the method of claim 5, of the Patent No. 534,543, in suit.

The only drawing, Fig. 10, and the only description of Patent, No. 564,586, which in any way relates

to claims five and thirty-five, of the patent in suit, never was a part of these British, French or German Patents.

Mr. Hicks' affidavit (R. p. 91) says that claims 9, 12, 13 and 14 of the English Patent are the same, respectively, as claims 8, 9, 10 and 13 of the U. S. Patent, 564,586, and concludes with the sweeping assertion that "The two patents, therefore, unquestionably cover the same invention."

These claims *all relate* to details *of construction* shown in the other figures of the patents mentioned, and have no relation whatsoever to Fig. 10 of Patent No. 564,586, or to claims five and thirty-five of the patent in suit.

Re Claim 9, of British Patent.

Claim 9 of the British Patent does not relate to the apparatus of claim thirty-five of the patent in suit, but relates to the apparatus shown in Fig. 8 of the British Patent. In this construction the *support* for the record is to be "*traveled in the plane of the vibration of the point of the stylus,*" in other words, the support of which carries the record is positively propelled or traveled to and fro so that the revolving disc may be moved in a horizontal plane past the fixed reproducing point in the plane of vibration of the point of the stylus.

These words in the claim were words of limitation, as hereafter more particularly pointed out.

Claim 9 of the British Patent reads as follows:

> "In a gramophone, the combination of a sound receiving diaphragm or other sonorous body; with a pivoted stylus controlled by a diaphragm and controlling the same, and a support adapted to carry a phonautographic record sheet or a copy of such record, in solid resisting material, traveling in the plane of vibration of the point of the stylus, substantially as described."

This claim 9 referred to the apparatus shown in Fig. 8 of the British Patent, which was a *recording* machine and a *reproducing* machine combined in which the *support* 7, adapted to carry the disc record or copy of such record, was positively traveled back and forth in the plane of vibration of the stylus point by means of screw threaded shaft 6, the threads of which passing through the threaded nut bearing 5 operated to travel the said support 7, carrying the record back and forth in the plane of vibration of the point of the stylus, or, in other words, in a horizontal plane.

This claim, which is said to correspond to claim 8 of the U. S. Patent, No. 464,586, referred to and was intended to cover this construction. While this fact is obvious, it is also apparent that it could have referred to no other construction, as there was no other construction illustrated or described in the British Patent, No. 15,232, which would answer or conform to the terms of such a claim.

Mr. Berliner then states (p. 4, l. 90) in the U. S. Patent, 564,586, that both the "process and apparatus thus far described may be modified in various ways without departing from the main features of my invention. * * *" This is quite clear.

Mr. Berliner then goes on to describe the apparatus shown in Fig. 10 of Patent No. 564,586 (R. p. 469, l. 90).

Re So-Called Modified Form.

Defendant's counsel contends that because the specification of the Berliner U. S. Patent, 564,586, states at page 2, lines 22 to 24, in referring to the drawings, that Fig. 10 is a sectional elevation of a *modified* form of my reproducing apparatus; and afterward at page 4, lines 90, etc., states "both the process and the apparatus thus far described may be modified in various ways without departing from the main

features of my invention''— and then describes Fig. 10—defendant's counsel for this reason contends that if it is a modified form it must be practically the same thing as the other apparatus.

It is respectfully submitted that this is not, and can not be the fact. It is clear that the form shown in Fig. 10 and described in the specification of 564,586 is a materially different form from the form of apparatus shown in Fig. 8 of the British Patent, and in this sense it is modified as stated in the specification, and very much modified. So much modified that it is a different apparatus, working in an essentially different manner, and by an essentially different method. The apparatus in Fig. 10 is so modified and changed from the apparatus in Fig. 8 that it is *only a reproducer,* and *not a recorder.* The apparatus of Fig. 10 could not operate as a recorder, as it has no means for mechanically positively propelling the stylus across the surface of the record, or propelling the record under the stylus.

The apparatus of Fig. 10 is essentially and solely a *reproducing* apparatus which does not require any means for positively propelling or traveling a support carrying the phonautographic record beneath the stylus in the plane of vibration of the point of the stylus. In other words, in a to and fro movement on a horizontal plane. It is so thoroughly modified and changed from anything shown in the previously described apparatus, namely, the apparatus of Fig. 1 of the U. S. Patent, *that it involves and embodies an essentially new and novel method of reproducing the sound from the phonautographic record, such as claim five in the patent in suit; and the apparatus itself is so modified and changed from the apparatus shown in Fig.* 1 *of the U. S. Patent that it, as before stated,* is a *reproducing apparatus only,* consisting of a traveling tablet having a sound record formed thereon

and a stylus adapted for engagement with the said record and free to be vibrated and propelled by the same, without any extraneous means whatsoever, such as shown in Fig. 8 of the British Patent, or Fig. 1 of the United States Patent, and becomes the new and novel apparatus subsequently embodied in claim thirty-five of the patent in suit, No. 534,543, which was co-pending in the Patent Office at the time the application for the Berliner Patent, No. 564,586, was there pending.

Defendant's counsel is making a desperate effort in order to endeavor to introduce Fig. 10 into the Britist Patent, No. 15,232, and into the corresponding French and German Patents, which is not and never was in those patents, or any description thereof. The method pursued by defendant's counsel is to lay hold of claim 9 of the British Patent and to endeavor to misconstrue its terms so as to make it appear that it should read upon Fig. 10, and refer to and embody that construction.

As before pointed out, this is obviously unfair, and without any substantial foundation.

The contention, therefore, that the expiration of this Berliner British Patent, No. 15,232, of 1887, and the corresponding German and French Patents, occasioned a forfeiture of claims five and thirty-five of the Berliner Patent, No. 534,543, is absolutely without foundation.

The authorities which have been herein considered are clear that the prior foreign patent, in order to curtail the term of the United States Patent, must be for identical invention.

Further Consideration of Points Raised in Defendant's Brief on Point 2.

The defendant's strained contention regarding these foreign patents is that, notwithstanding the fact that they do not contain any reference to Fig. 10, such as in No. 564,586, or any description of the same, either apparatus or process, is stated (under Sub-Division (d), Brief accompanying petition for writ of *certiorari*, p. 93, as follows):

> "It has been held by the Circuit Court of Appeals, as will be presently shown, that claims five and thirty-five, in suit, claim broadly the invention of United States Patent, No. 564,586. It follows, therefore, if such holding be correct, that claims five and thirty-five cover broadly the invention of the three prior English, German and French Patents mentioned, to Berliner, and that the patent in suit expired with each of the three prior foreign patents mentioned, before the beginning of suit, at the dates above given."

The defendant then quotes the concluding portion of the decision of the Court of Appeals in the Graphophone case (R. p. 74). It is thought that further comment is hardly necessary. What the U. S. Court of Appeals found, and evidently meant to state as finding in considering the question of alleged "public use," was, in substance, that as U. S. Patent, No. 564,586, filed November 7, 1887, contained Fig. 10, and a description thereof, this fact warranted the embodying of these claims five and thirty-five in the application for the patent in suit, filed while the first application was pending, which second applicaton became a patent before the Patent No. 564,586 was granted; that for the purposes of carrying back the date of invention of claims five and thirty-five, "the second may fairly be considered a continuation of the first, and thus Berliner's application antedates the public use."

The defendant also contends, in effect, that this patent in suit comes within the decision of Miller *v.* Eagle Mfg. Co., 151 U. S., 186, though we submit that there is nothing in the decision of this latter case which could possibly render void the patent in suit, No. 534,543, under the doctrine laid down in that case.

The patent in this present suit was the first to issue, whereas the patent in controversy in Miller *v.* Eagle Mfg. Co., was the second patent. However, there is no analogy between the two cases.

Defendant's counsel (Brief on petition for writ of *certiorari*, bottom p. 103, top p. 104), in this connection states, that his position is "that claims five and thirty-five of the patent in suit cover the invention of Patent No. 564,586, and, therefore, cover the invention of the prior English, German and French Patents mentioned."

It is difficult to understand how he brings such a contention within the decision of Miller *v.* Eagle Mfg. Co.

It is also difficult to understand his contention that these claims were patented in the prior English, German and French Patents when all description, and all reference to the subject matter of these claims are **distinctly and specifically omitted from these foreign patents, and no reference whatsoever made to them in the said foreign patents.**

Defendant's contention as to claim nine of the British Patent would be impossible, among other reasons, for the reasons:

(1). That the claim itself contains limitations which prevent such a construction, and shows that the construction to which it refers is the apparatus shown in Fig. 8 of the British Patent, No. 15,232, having a

feed screw for positively traveling the record support in the plane of the vibration of the point of the stylus.

The claim specifies as one of its elements, "a **support** adapted to carry a phonautographic record sheet, or a copy of such record, in solid resisting material, *traveling in the plane of vibration of the point of the stylus, substantially as described.*" The support is the support 7.

(2). Fig. 8 is the only construction in the British Patent, No. 15,232, of 1887, upon which this claim would fit, and as there is absolutely no other description, or illustration, in the British Patent of the subject matter of claims five and thirty-five, there is absolutely nothing else upon which to base defendant's construction of claim nine.

Claim nine of British Patent, No. 15,232, of 1887, defendant states is substantially similar to claim eight of the Berliner Patent, No. 564,586, which reads as follows:

> "8. In a gramophone, the combination of a sound-receiving sonorous body; with a pivoted stylus controlled by and controlling the same, and a support adapted to carry a phonautogramic recording surface, or a copy of such record in solid resisting material, traveling in the plane of vibration of the point of the stylus; substantially as described."

(3). There is nothing in claim nine of the British Patent, or claim eight of the U. S., No. 564,586, which specifies, or requires, that the reproducing stylus shall be *free to be propelled by the record.* The "pivoted stylus" mentioned in claim nine of the British Patent, and claim eight of the U. S. Patent, means, as described in the specification, the stylus 49 pivoted upon the sound box and connected with the diaphragm 30, as shown in Fig. 9 of the British Pat-

ent, and in Fig. 2 of the U. S. Patent. This pivot mounting is shown in section in Fig. 5 of the U. S. Patent, which is stated to be a cross-section on the lines x-x of Fig. 2. This pivoted construction is quite fully described on page 3 of the U. S. specification, Patent No. 564,586, lines 20 to 44 (R. p. 468), and in the coresponding portions of the British Patent. It is also referred to in other parts of the specification.

It is the only construction of pivoted stylus described, or illustrated, in the Patent No. 564,586, or in the British Patent referred to.

(4). Claim nine of the British Patent manifestly **combines both a recording and a reproducing apparatus**—it includes in the combination "**a pivoted stylus controlled by a diaphragm, and controlling the same.**" This can mean only one thing, viz.: that in the apparatus claimed the pivoted stylus is controlled by the diaphragm, and that also the construction is that that pivoted stylus controls the diaphragm; this means that the pivoted stylus is controlled by the diaphragm when the apparatus, such as shown in Fig. 8 of the British Patent, is being used as a *recorder*—that is, where the diaphragm operated by the sound waves of the voice in the act of recording moves, or controls, the stylus so that its pulsations will be recorded upon the recording material on the surface of the disc shown in Fig. 8. And that the construction shall also be in the same apparatus that the pivoted stylus shall control the diaphragm, as when operating as a *reproducing* machine, in which case, as in Fig. 8 of the British Patent, the stylus is pulsated by the sound waves of the previously recorded record, then desired to be reproduced, and thereby being pulsated the stylus moves, or controls, the diaphragm to which it is attached so as to reproduce the recorded sound.

Further, claim nine calls for a support adjusted

to carry "a phonautographic **record** sheet," which is the recording sheet upon which the record is to be formed when the apparatus is being used as a *recorder*, or "a **copy** of such record," which is the copy when completed as described and ready to be reproduced when the apparatus is to be used as a *reproducer*.

It is respectfully submitted that these facts in themselves are convincing and conclusive—that claim nine embodies an apparatus which is both a recorder and a reproducer, such as illustrated and described in Fig. 8.

As previously pointed out, this construction can not refer to Fig. 10 of the Berliner U. S. Patent, 564,586, as that can not operate as a **recorder** by any possible means, but is simply a *reproducing apparatus*, and nothing else.

The words "pivoted stylus" used in the claim have no reference to the mounting of the frame carrying the reproducer, but as stated refer to the mounting of the stylus on the sound box.

Claim nine, therefore, of the British Patent, and claim eight of the U. S. Patent, No. 564,586, could not possibly be construed as being for the invention of claims five and thirty-five of the patent in suit.

Re Testimony of R. M. Hunter.

Complainants have examined their expert, Mr. R. M. Hunter, in taking its *prima facie* proofs in this case for final hearing.

Parts of this Hunter testimony were quoted by defendant into his Brief in the Court below attached to Defendant's Petition (see p. 110) and also by the Complainants, without objection, and will also be referred to and quoted here.

In answer to XQ. 121 Mr. Hunter testified that he

did not understand the word "traveling" as used in claims 1, 2, 3, 7, 8 and 13 of Patent, No. 564,586, as meaning the longitudinal movement of the record tablet, or its support, and that the words referred to the rotation.

It is clear, however, how Mr. Hunter was misled into including claim eight in this category by reference to XQ. 120, immediately preceding XQ. 121, wherein defendant's counsel, in purporting to quote the language of claim eight, in this connection, misquoted it.

XQ. 120 reads as follows:

> "A traveling tablet in Patent 564,586 is a tablet rotating and moving longitudinally, is it not? I call your attention to claim one where a 'traveling plate;' claim two where a 'traveling support;' claim three where a 'traveling plate of glass;' claim seven where a 'traveling plate;' claim eight where a 'traveling recording surface, or a copy of such record in solid resisting material;' claim thirteen where a 'traveling support' is mentioned" (R. p. 470).

Mr. Hunter's answer to this question was:

> "The drawings show the record tablet as a disc, but many of the claims do not by their terms restrict the invention to a disc or a tablet of circular form or intended to be rotated, so that I am not prepared to say that those claims to which you have referred which do not indicate in some manner the requirement of a disc are limited to such form of tablet."

Mr. Hicks, defendant's counsel, then asked Mr. Hunter (XQ. 121) "whether the word 'traveling' as used in Patent No. 564,586 does not include a tablet which rotates and at the same time moves longitudinally." Mr. Hunter then made the answer to XQ. 121 referred to on page 110 of Defendant's Brief, attached to the Petition.

In making this answer Mr. Hunter had in mind the quotation from the claim, as given by defendant's counsel in XQ. 120, relative to claim eight, viz.:—"a traveling recording surface, or a copy of such record in solid resisting material," which language is not found in the claim. The quotations in XQ. 120 from the other claims 1, 2, 3, 7 and 13, however, are correct.

That Mr. Hunter was relying upon the accuracy of counsel's quotations is evident from a portion of his answer to XQ. 120, which states "I am not prepared to say that *those claims* to which you have referred *which do not indicate in some manner the requirement of a disc are limited to such form of tablet,*" meaning a tablet rotating and moving longitudinally.

Appreciating, therefore, that Mr. Hunter had been misled, or had misunderstood the question, he was asked on re-direct at a subsequent meeting.

"RDQ. 137. Your attention is called to XQ. 120 and 121 and your answers thereto. Please state whether or not you desire in any way to modify either of these answers or to make any additional statement concerning the same.

* * * * * * *

"A. In reply to those questions XQ. 120 and XQ. 121, I assumed that the quotations in the questions were correct and I have since found that the said quotations in XQ. 120, so far as they refer to claims 1, 2, 3, 7 and 13, are correct, but that the quotation purporting to be from claim eight is not correct. Under the assumption that the quotations were correct, in answering XQ. 121 I was misled into including claim eight without relying upon a careful examination of the language of the claim itself. If the only language in claim eight referring to the traveling record were that quoted in XQ. 120, my answer to XQ. 121 would be the same as originally given, but as I find that this

is a misquotation and that the language is different, my answer to XQ. 121 must be different regarding claim eight. Claim eight reads as follows:

> "8. In a gramophone, the combination of a sound-receiving sonorous body; with a pivoted stylus controlled by and controlling the same, and a support adapted to carry a phonautogramic recording surface, or a copy of such record in solid resisting material, traveling in the plane of vibration of the point of the stylus; substantially as described."

"The language, therefore, in claim eight, to which the 'traveling' refers, is 'a support adapted to carry a phonautogramic recording-surface, or a copy of such record in solid resisting material,' the said support being so adapted that it shall have the capacity of '*traveling in the plane of vibration of the point of the stylus, substantially as described.*'

"This language of claim eight can have but one meaning, viz., that the support for carrying the recording surface or a copy of the record must travel in the plane of vibration of the point of the stylus, which would mean that it must travel in a substantially horizontal plane back and forth in the plane of the vibration of the point of the stylus, which construction is accurately illustrated in Fig. 1 of the said Patent, No. 564,586, which shows the support 7 journalled on a longitudinal rib 3 and carrying the disc 13. As the shaft 6 revolves, the screw threads on a portion of its surface passing through the nut bearing 5 causes the support 7 to travel in a rectilineal direction in the plane of vibration of the point of the stylus 29. This is fully described in the specification, particularly on page 2, lines 43, etc., also page 2, lines 104, etc., where it states:

> 'If, on the other hand, the weight is allowed to descend, it will rotate shaft 23, this in turn will

rotate gear wheel 22, which, meshing with pinion 20, will rotate the latter and the connected shaft 6, and in the manner hereinbefore described support 7 will receive a rectilinear motion, while flange 10, upon bevel gear 9, will both rotate and move in a straight line. For every complete revolution of bevel gear 14, support 7 and bevel gear 9, with its connected flange 10, will be moved in the line of a diameter a distance equal to the pitch of the screw threads upon shaft 6, and it will now be understood that if a plate 13 is fixed to flange 10 and a fixed pencil or stylus be lightly pressed upon the plane surface of said plate a spiral line will be drawn upon the plate.'

"There can be no other interpretation of the language of claim eight than that which I now give, and I therefore wish to correct my former statement with respect to said claim eight, to conform with the opinion above expessed.

"In corroboration of what I have stated above, I find that during the prosecution of claim eight (formerly claim nine) on appeal before the Board of Examiners-in-Chief, as shown by the file wrapper, the particular language found in claim eight, and more particularly the following words 'traveling in the plane of vibration of the point of the stylus' were used to denote the direction of travel of the *support* for the record tablet in relation to the direction of the vibation of the stylus, and more particularly were intended to distinguish the invention of Berliner from that of the Edison Patent, No. 227,679, of 1880 (R. p. 346), in which the support for the record tablet was caused to travel in a direction at right angles to the line or direction of vibration of the stylus point. This distinction between the invention disclosed in the Edison Patent and the invention disclosed in the Berliner Patent under consideration was intended to be defined by the particular words 'traveling in the plane of vibration of the point

of the stylus' found in claim eight of the Berliner Patent, No. 564,586.

"In connection with this, I find, in the decision rendered by the Examiners-in-Chief on November 15, 1895, when referring to this claim eight (then claim nine):

> 'As pointed out in the applicant's brief, there is a difference between the apparatus of the patent and that called for by this claim in that while the support for the recording surface of the patent travels in a plane at right angles to the plane of vibration of the point of the stylus, the support called for by the claim travels in the plane of the vibration of such stylus. The difference is clear. The result due to this difference in the plane of travel of the support is material. The apparatus of the reference cannot effect the drawing of an undulatory line of even depth which results from the use of the apparatus of this claim.'

"The above quotation, in speaking of the reference, refers to the Edison Patent, No. 227,679 (R. p. 346), to which I have before referred.

"In view of what I have said, it is quite clear that the words 'traveling in the plane of vibration of the point of the stylus' do not refer to the rotation of the record disc, but refer solely to the travel of the support, which is the last element of the combination of the claim. In other words, this last element, defined by the last four lines of the claim, might have been stated as follows:

> 'and a support traveling in the plane of vibration of the point of the stylus, and adapted to carry a phonautogramic or recording surface, or a copy of such record in solid resisting material.'"

The construction shown in Fig. 1 of Patent No. 564,586, as shown on page 4, lines 46 to 89 (R. p. 469), was used for reproducing as well as recording.

It is, therefore, clear that claim nine of the British Patent (R. p. 524) related to such construction, as illustrated in Fig. 8 of that patent (R. p. 526), corresponding to Fig. 1 of the U. S. Patent, No. 564,586 (R. p. 463), and could have no reference whatsoever to the apparatus or process of claims five and thirty-five of the patent in suit. The British Patent, No. 15,232 (R. p. 516), contained absolutely no description, or drawing, whatsoever relating to such a process, or apparatus.

While the U. S. Patent, No. 564,586, was filed November 7, 1887, and the British Patent November 8, 1887, it is clear that the application for the British Patent must, in order to have been filed on November 8, 1887, have been forwarded for filing at least ten days prior to the filing of the domestic patent. It is a fair inference, therefore, that Fig. 10 in the U. S. Patent, No. 564,586, and the description thereof, was incorporated into the U. S. specification after the British application had been mailed. At all events, there was a very good reason why it was not incorporated.

Atention is also called to the fact that it was not until after the U. S. Patent had been applied for, November 8, 1887, that the description of the process and apparatus such as illustrated in Fig. 10, was published in the Electrical World of November 12, 1887 (R. p. 243).

Re Nature of the Defences.

We would call this Honorable Court's attention to the unfair and misleading statements regarding the identity of the said British, French and German Patents with the U. S. Patent, No. 564,586, which occur in a number of places in the defendant's brief accompanying the petition for a writ of *certiorari* herein, under Point Four (p. 90), where he claims the exact similarity, and frequently disregards the fact that the

only portion of the drawings and specification of Patent No. 564,586, which related to claims five and thirty-five, of the patent in suit, were never incorporated in the British Patent, No. 15,232, or in the German Patent, No. 45,048 (R. p. 132), or the French Patent, No. 186,827 (R. p. 123).

The defendant's counsel illustrates the desperate character of the defence in the numerous trivial and flippant points which he insists on, and enlarges upon, among others that noted under sub-division (i) of Point Four (Brief accompanying the petition for writ of *certiorari*, p. 104), viz.: He contends that claims thirty-one and thirty-two and six and eight of the patent in suit are infringed by the lever and stylus of the prior German Patent.

This question has particularly been covered in the discussion of Point One of this brief, and is, we submit, disposed of by the authorities which we have heretofore cited. Claim thirty-one is for the minor detail of construction of a pivoted stylus adapted to move under the vibrations of the diaphragm, and elastic in a plane at right angles to such motions. Claim thirty-two relates to a wedge-shaped reproducing stylus. Claim six relates to a detail of construction of a recording stylus, with elastic leaf spring, with a point of harder material. Claim eight relates also to a recording stylus with an elastic leaf spring, with an iridium point.

A comparison of these claims with the German Patent referred to is requested, and it is respectfully submitted that it will be found that the German Patent embodies a different construction from that of the claims referred to; even if it were the same, under the authorities, the U. S. Patent could not be invalidated by the expiration of this German Patent for such a minor detail, as hereinbefore pointed out.

The defendant's voluminous brief is burdened

with *reiterations* of this above noted defence, not only under Point One, where it is properly considered, but under sundry other points.

The character of the defendant's defences is well illustrated by their contention, that because a stylus point shown in a prior British, German or French Patent, may be *wedged shaped*, that, therefore, the patent in suit as to claims five and thirty-five, and all other claims, must be invalidated and forfeited by reason of the existence in the patent in suit of a claim, such as claim thirty-two, calling for a reproducing stylus having a *wedge-shaped* point.

If this is the law the defendant has cited no authorities to this effect. As hereinbefore pointed out, however, the authorities are to the contrary.

The authorities referred to in this brief under *Point One* apply equally to defendant's *Point Two*, and we shall, therefore, not repeat them here, but ask this Honorable Court's attention to the authorities in this brief, as set forth under *Point One*.

RE POINT THREE.

Re Alleged Prior Public Use.

In the suit against the American Graphophone Company, the defence of prior public use was based upon an alleged public use in a lecture delivered before the Franklin Institute, in Philadelphia, by Mr. Berliner on May 16, 1888. The United States Circuit Court of Appeals in the Graphophone case (R. p. 73) decided this question, holding that no question of this kind could arise in this case for the reason that Berliner had filed his application for U. S. Patent, which subsequently became number 564,586, on November 7, 1887, some six months prior to said Franklin Institute lecture, holding that the specifications in that applica-

tion were full enough to warrant the making of the claims five and thirty-five which were subsequently incorporated in the Berliner Patent in suit, No. 534,543, while the two ases were co-pending in the Patent Office. In this connection, the Circuit Court of Appeals in the Graphophone case said:

> "*Per Curiam:*
>
> In affirming this decree we do not find it necessary to add anything to the careful and exhaustive discussion of the issues which will be found in Judge Hazel's opinion, with one single exception. In disposing of the defence of prior public use based upon the lecture and exhibition before the Franklin Institute, the Circuit Court apparently relied mainly upon the proposition that what took place there was not a public use, but rather an experimental one. Without discussing the questions thus raised or expressing any definite opinion either way, we prefer to dispose of the alleged prior public use by means of the application of Berliner which was filed six months prior to the Franklin Institute lecture, and which eventuated in Patent 564,586, issued subsequent to the patent in suit. The specifications in that application (for 564,586) were full enough to warrant the making of the claims here in controversy (five and thirty-five) at any time the application might have been amended by adding such claims, and in our opinion it is immaterial that instead of thus amending it, he took the broader claims on another application filed while the first was pending. The second may fairly be considered a continuation of the first, and thus Berliner's application antedates the public use, and the facts will not sustain the contention that he abandoned his invention here in suit.
>
> The decree is affirmed."

The defendant in the present case relies upon an alleged prior public use which he says occurred in New York during the week preceding August 18, 1888,

and upon the publication and disclosure of such alleged use in the "Electrical World" for August 18, 1888, as well as upon the alleged Franklin Institute public use.

As hereinafter averred by defendant's affidavits of T. C. Martin and Joseph Wetzler (R. p. 191-194), this alleged public use shortly prior to August 18, 1888, consisted in Mr. Berliner inviting these two gentlemen to his bedroom in the Union Square Hotel, New York, to let them see the said invention, and there reproducing a record in the manner, as the affidavit says, subsequently described in the "Electrical World" of August 18, 1888 (R. p. 274). It is understood that and the defendant claims that this demonstration in Mr. Berliner's private bedroom at the Union Square Hotel to his two invited guests, Mr. Martin and Mr. Wetzler, constituted a public use.

While it is obvious that this could not possibly be construed a public use within the statute, this incident, as well as the Franklin Institute lecture, occurred a number of months subsequent to the filing on November 7, 1887, of the application for Patent 564,586, and for the reasons set forth by the Court of Appeals, could not possibly constitute a prior public use, as it was not prior.

We will, however, consider more in detail each of these alleged prior uses.

We will consider the subject in the following order:

1. Even if such demonstrations had constituted a public use, which they did not, the application for the patent in suit, under the authorities, in considering questions of this character, is construed to be the date of the filing of the first co-pending application disclosing the invention, viz.: November 7, 1887.

2. The use of the reproducing machine referred

to at the Franklin Institute, on the evening of May 16, 1888, did not constitute a *public use,* within the meaning of the Statute.

3. The use of the reproducing machine in playing a record by Mr. Berliner, about a week prior to August 18, 1888, in his private bedroom at the Union Square Hotel, New York, before his invited guests, Mr. Martin and Mr. Wetzler (R., pp. 191-194), was unquestionably a *private* use, if anything, and could not be construed to be a *public* use within the statute, even if the application were filed later.

4. As to the "Electrical World" of March 18, 1888, at that time there was no provision in the statute requiring that there should be no publication for more than two years prior to the date of application. The amendment to the statute came subsequently in this regard.

It is respectfully submitted, while it is clear, as before pointed out, that the demonstration by Mr. Berliner of the apparatus in suit before the Franklin Institute, on the evening of May 16, 1888, was of an experimental character and could not possibly, under the decisions, be construed to be a "Public Use" within the statute, and the bed room exhibition was manifestly a private use, it is desired to consider first the first point above noted; viz:—

At the Time of the Alleged Public Uses Berliner had Pending an Application for Patent, Filed November 7, 1887, Embodying and Disclosing the Invention in Suit.

As is clearly shown by the proofs, the invention claimed in claims 5 and 35, of the patent in suit, was clearly illustrated and described in an application for

U. S. Letters Patent, filed November 7, 1887, which resulted in the U. S. Patent No. 564,586. This invention was illustrated in Figure 10, of the drawings of that application, and described in the specification which fact has been referred to in the decision of the Court of Appeals, in the Graphophone case, carrying back the date of the Berliner invention at least to the date of the filing of this application for patent No. 564,586 (Rec. p. 73).

It is, therefore, apparent that, at the date of the Franklin Institute lecture, of May 16, 1888, Mr. Berliner had an application for U. S. Letters Patent on file in the Patent Office at Washington, which application embodied and included the invention which was subsequently patented and claimed in the Berliner Patent No. 534,543, in suit. The patent in suit was not filed until March 30, 1892, during the pendency of the application for patent No. 564,586, which latter patent did not issue until July 28, 1896, though it was applied for November 7, 1887.

The fact did not make any difference that the application for patent No. 564,586 did not, up to March 30, 1892, (the date of filing of application for patent No. 534,543), contain the claims such as 5 and 35, which were then embodied in the patent in suit, No. 534,543, filed March 30, 1892; the invention claimed in these claims was fully illustrated and described in this application for patent No. 564.586, and the applicant would have been entitled at any time during the pendency of this first case to have incorporated these claims in that case, if he so desired.

The patent in suit, No. 534,543, is, therefore, while not strictly a divisional case, an outgrowth, so far as claims 5 and 35 are concerned, of the first application, filed November 7, 1887. Had Mr. Berliner not filed this second application for the patent in suit, No.

534,543, he would have been entitled to the same claims, 5 and 35, in the previously filed application, which was then pending, had he seen fit to have filed them in that case, and which he could have done at any time before that application was allowed on April 11, 1896.

It is manifest, therefore, that Mr. Berliner, at the date of the Franklin Institute lecture and of the bed room exhibition, had an application on file in the United States Patent Office, embodying the invention in the present suit.

Authorities.

It is desired to submit a few authorities to the effect that, under such circumstances as involved in the present question of alleged "Public Use" for more than two years prior to the filing of the application, the second application containing the claims in controversy is so corelated to the first application that for the purpose of the question of whether within two years from the date of the alleged "Public Use" the inventor had filed an application for a patent, the date of filing may be construed to be the date of the filing of the previous application.

Robinson on Patents, paragraph 580, Note 4, states:

> "That where a second application is made for part of an invention disclosed in a former and still pending application, the latter is a continuation of the former so far as the question of two years' public use is concerned. See Graham *v.* McCormick, 11 Fed. Rep., 859."

Also in another note under this paragraph, it is stated:

> "That when applications are continuous they take the date of the original on questions of novelty and abandonment. See Henry *v.* Francestown Soap Stone Co., 2 Bann. & A., 221."

In Volume 22, of the Am. & E. Enc. of L., (2d Ed.) page 340, in discussing the time and continuance of the use or sale prior to the date of the application of patent which will defeat the patent, it is stated:

> "In the case of successive applications which may be considered as one proceeding, the public use or sale must have existed two years before the date of the first application in order to defeat the patent."

In support of this proposition, several authorities are cited, which will now be referred to.

In Stirling Co. *v.* St. Louis Brewing Assen., 79 Fed. Rep. 80, the application of the patent in suit was filed June 5, 1894, and the invention was shown to have gone into public use over two years prior to that date, and the record showed that an application for patent for the same subject-matter, so far as regards the claim in controversy was concerned, was filed December 22, 1893, and the Court gave to the patent in suit the benefit of the filing date of the earlier application and states:

> "On these facts I hold that, so far as regards the defense of two years' public use, the claims sued on relates back to the first application, and hence, that the defense of public use is not made out. Godfrey *v.* Eames, 1 Wall. 317, 325; Smith *v.* Vulcanite Co., 93 U. S. 486,500; Graham *v.* McCormick, 5 Ban. & A., 244,248, 11 Fed. 859."

International Tooth Crown Co. *v.* Richmond, *et al.*, 30 Fed. Rep. 775, heard before Judges Wallace and Shipman, is to the same effect. In this case the application upon which the patent in suit was granted, was filed December 20, 1880, and there had been a public use of the invention over two years prior to that date, but, the same inventor had filed a prior application for patent on January 6, 1879:

"Which had never been abandoned for substantially the same invention."

As in the case at bar, the first application contained some matters foreign to the subject of the second application, and the Court held that it disclosed the invention of the claims of the patent in suit and held that:

"Both applications are to be considered as parts of one continuous proceeding, and the two years within which the invention could not be publicly used without invalidating the patent did not begin to run until January 9, 1879. Godfrey *v.* Eames, 1 Wall., 317; Smith *v.* Goodyear, etc., Co., 93 U. S. 500; Graham *v.* Geneva Lake, etc., Co., 11 Fed. Rep., 138."

In another case of Howe against Newton, 12 Fed. Cas. Case No. 6771, before Justice Clifford and Judge Lowell, it was decided that two applications pending at the same time in the Patent Office, and embodying the same invention, are continuous and that the public use for two years prior to the date of the second application would not defeat the patent as the date to be given the second application was, so far as relates to the defense of public use, the date of the original application.

In the case of Henry *v.* the Francestown Soapstone Stove Co., 2 Ban. & A., 221 and 11 Fed. Case No. 6382, it was stated that:

"It has frequently been held that the date of filing the application on which the patent was granted is not the date on which the time of use or sales is to be reckoned, but that the time is to relate back to the date of *any* co-pending application."

In Bell *v.* Daniels, 3 Fed. Cas., case No. 1247, it

was held that where a second application was filed before abandonment of the first application, that the two years during which the invention might be used before the application without working abandonment, or, in other words, public use, must be dated from the first application. It was held that where the first application, or first two prior applications were not abandoned, that so far as the defense of public use was concerned, the date of the application upon which the patent eventually was patented dates back to the first application.

As in the case at bar where the subject-matter of the claims in question of the second application was embraced in the first application, it was held in Graham *v.* McCormick, *et al.*, 11 Fed. Rep., 859, that:

> "The subject-matter of the second application was embraced in the first, and the invention now in controversy was described in the specifications and the drawings which constitute part of the first application, and we think it may be said that the continuity of the proceeding which originated in the first application was not broken, up to the time when the patent for the invention in suit was granted in 1868. See also, Blandy *v.* Griffiths, 3 Fish. 616."

In the Circuit Court of Appeals for the Eighth Circuit, in Hayes-Young Tile Plate Co. *v.* St. L. Transit Co., 137 Fed. Rep., 80, Judge Sanborn, held as follows:

> "In cases in which the first application has not been abandoned, subsequent applications and amendments constitute a continuance of the original proceeding, and the two years' public use or sale which may avoid the patent, must be reckoned from the presentation of the first application, and not from the filing of subsequent applications or amendments. U. S. *v.* American Bell Telephone Co., 167 U. S. 224, 17 Sup. Ct. 809, 42

L. Ed. 144; Colgate *v.* Western Union Tel. Co., Fed. Cas. No. 2,995; Miehle *v.* Read, 96 O. G. 426; Thomson-Houston Electric Co. *v.* Winchester Avenue R. Co. (C. C.), 71 Fed. 192, 73 O. G. 2155; Godfrey *v.* Eames, 1 Wall. 317, 17 L. Ed. 684; Smith *v.* Goodyear Dental Vulcanite Co., 93 U. S. 486, 23 L. Ed. 952; Cain *v.* Park, 14 App. D. C. 42, 86 O. G. 797, 798; *Ex parte* Stewart, 4 O. G., 665; Stirling Co. *v.* St. Louis Brewing Ass'n (C. C.), 79 Fed. 80; Dederick *v.* Fox (C. C.), 56 Fed. 714, 717; Ligowski Clay-Pigeon Co. *v.* American Clay-Bird Co. (C. C.), 34 Fed. 328, 333."

And the same rule is laid down by the Supreme Court, in Smith *v.* Goodyear Dental Vulcanite Co., *et al.*, reported in 93 U. S., 486.

It is contended by defendant that because Berliner's first application did not contain these particular claims 5 and 35, that the second application should not have the benefit of the date of the first, but the effect of the foregoing decisions is that if the first application contains a disclosure of the subject-matter of the matter claimed in the second application, the rule of continuity applies, and it has been so held. Walker, on patents, states (4th Ed., Page 84), that:

> "An application which described a particular invention, takes date on the date of its filing, whether or not it claimed that invention at that time."

Citing Edison *v.* American Mutoscope Co., 110, Fed. Rep. 662.

In Graham *v.* McCormick, *et al.*, 11 Fed. Rep. 859, the second application was filed for a certain part of the invention disclosed in a prior application. It was held that the two applications should be regarded as a *continuous proceeding*, and that the public use of the invention to defeat the patent granted upon such

second application must be shown to have occurred more than two years prior to the first application.

It is important to note that in this case the facts were quite similar to the case at bar in that each of the applications included other matters of invention. It is held that where a person has, within the meaning of the patent law, made an invention which he has described in his specification, including other matter of invention, for which a patent has been issued, *that he should not be precluded, for that reason, from applying for, and obtaining, a patent for that which was not claimed in the first patent.* This is the decision of U. S. Circuit Court, for the Northern District of Illinois (1880).

In Godfrey *v.* Eames, 68 U. S. 317, the Court held, as follows:

> "In this case the patentee filed his application in the Patent Office on the 31st of January, 1855, and from that time it was constantly before the office, until the patent was issued on the 2d of March, 1858, except that on the 24th of April, 1857, it was withdrawn and refiled on the same day with an amended specification. It was admitted and proved 'that the patentee, in the summer and fall of 1854, and since, publicly manufactured and sold boot-trees containing his alleged invention.' The sales and use, as thus shown, were less than two years before the first application was filed, and hence, according to the letter of the Act of March 3, 1839, cannot affect the validity of the patent."

In Smith *v.* Dental Vulcanite Co., 93 U. S. 486, the Court held:

> "If, then, as we think it must be held, the proceeding to obtain the patent was a continuous one from 1855 until it was granted; if the application of 1855 is not severable from the proceed-

ings of 1864, there is no foundation whatever for the allegation that the invention was abandoned to the public, and that it was in public use or on sale for more than two years before the inventor's application."

In *ex parte* Livingston (Commissioners of Patent Decisions of 1881, pg. 42), the Commissioner of Patents said:

> "In ascertaining the time when public use began to run against the patentee, under the provisions of the laws of 1836 and 1839, the Courts followed a principle which may be stated as follows: Where an inventor has once disclosed his invention to the Patent Office, and manifested his intention to obtain a patent therefor by duly filing an application for a patent, any subsequent application filed by him for the same invention will be deemed *obtain continu* or renewal thereof, unless such first application has been in the meantime abandoned in fact or by operation of law. * * * I know of no recent decisions or provisions of law which render this doctrine obsolete at the present day." Citing the following authorities: Godfrey *v.* Eames, 1 Wall., 317; Bell *v.* Daniels, 1 Bond, 212; Singer *v.* Braunsdorf, 7 Blatchf., 521; Jones *v.* Sewall, 3 O. G., 630; Johnson *v.* Fassman, 5 Fish., 198; Colgate *v.* Western Union Telegraph Company, 14 O. G., 443; Goodyear Dental Company *v.* Willis, 7 O. G., 43; Henry *v.* Francestown Soapstone Company, 9 O. G., 408; U. S. Rifle and Cartridge Company *v.* Whitney Arms Company, 11 O. G., 373.

It is fundamental that as long as the application of Patent No. 564,586 was pending, these claims, five and thirty-five, of the patent in suit, could have been inserted therein, and that patent could have been granted with these claims. Surely the defendant does not contend that had this patent No. 564,586 contained these claims it would have been invalidated by reason

of the scientific lecture at the Franklin Institute delivered after the application was filed or the subsequent disclosure in Mr. Berliner's bed room. And the attention of the Court is directed to the fact that these broad and basic claims were inserted *in the patent which was granted first,* so that the patentee cannot be charged with attempting to extend the term of his monopoly.

And again, it will be conceded that the practice of the Patent Office is such that if the application of Patent No. 534,543, in suit, had been placed in interference with another application in the Patent Office, as far as the burden of proof was concerned, and the date of invention in the Patent Office, the Commissioner of Patents would have given to Berliner the date of his earlier application, the practice being that, as far as the Patent Office is concerned, the date of an invention, is the date when a complete application disclosing such invention was filed in the Patent Office, and we have shown that the application of Patent No. 564,586 contained a complete disclosure of the subject matter of claims five and thirty-five.

And again, in public use proceedings, which often occur in the Patent Office, it must be conceded on all sides that a second application containing a claim having subject matter disclosed in a prior co-pending application, takes the date of the earlier application for such public use proceedings.

No Extension of the Term of the Patent.

By patenting the method and apparatus of claims five and thirty-five in the application filed March, 1892, instead of in the application filed November 7, 1887, Mr. Berliner did not prolong his monopoly, as intimated by defendant's counsel, but he in fact *shortened* the period of expiration of his rights. If he had in-

serted these claims in the application filed November 7, 1887, the patent would not have expired until July 28, 1913, as that patent did not issue until July 28, 1896. As it is, the patent in suit, in which the claims were inserted, filed March 30, 1892, issued February 19, 1895, and consequently will expire Februay 19, 1912.

While it is submitted that the foregoing is conclusive, we will consider the two alleged public uses.

(2) The demonstration at the Franklin Institute lecture did not constitute a "Public Use."

Defendant seems to contend that Berliner's act in exhibiting and operating the device at his Franklin Institute lecture, on the evening of May 16, 1888, constituted such a public use as would invalidate the patent in suit:

(a) If it was an operative device;

(b) If it embodied the invention of the claims.

Defendant further contends that this use on this particular evening at the Franklin Institute was not an experimental use.

It is proven, admittedly, that the device of the claims was not sold to the public until the autumn of 1894, over six years subsequent to the date of this lecture.

It is not contended that Mr. Berliner received any profit from the public for his invention, in any way, prior to the application for the patent in suit. So that the only contention is, that Mr. Berliner, in reproducing a few etched sound records at the conclusion of this lecture at the Franklin Institute, on the evening of May 16, 1888, upon the reproducing apparatus, illustrated in his lecture in the centre figure on page 269 of

the Record, placed his invention in public use within the contemplation of the Statute, Sec. 4886.

It is contended, on behalf of the complainants, that this use did not constitute a *public use* within the contemplation of the Statute, but was of an *experimental* character, as shown by Mr. Berliner's Franklin Institute lecture (R., pp. 245-269), as held by the lower Court.

It stands to reason that before a device can be properly experimented with—where the experiment must be more or less of a public nature—it must be finished and completed before the experiment commences, otherwise, there can be no fair test or experiment of the completed invention.

A test or experiment of an incompleted invention would not prove the capacity or capabilities of the real invention, that is, the *completed thing.*

The test may prove that certain changes may be necessary, but the mere fact that it may show that none are required does not make the use before an audience any the less an experiment.

Defendant's counsel seems to utterly fail to appreciate this distinction.

In this connection, Mr. Justice Bradley, in deciding the case of Elizabeth *v.* Pavement, 97 U. S., 126, hereinafter more fully referred to, in considering this question of the experiment in public of the completed thing, said:

> "If durability is one of the qualities to be attained, a long period, perhaps years, may be necessary to enable the inventor to discover whether his purpose is accomplished.
>
> "And though, during all that period, HE MAY NOT FIND THAT ANY CHANGES ARE NECESSARY, yet he may be justly said to be using his machine only by way of experiment; and no one would say that such a use, pursued with a *bona fide* intent of testing the qualities of the machine, would be a public use within the meaning of the statute."

In the American and English Encyclopedia of Law, 2d Ed., Vol. 22, p. 338, it is said that the experiment in public, more than two years, prior to the date of the application, in testing the operation of the invention, does not invoke the bar of the statute, "*though no changes may be made*" in the device by reason of the experiment. Other authorities will be hereinafter referred to.

Robinson on Patents, Vol. 1, Sec. 355, states: "A use clearly experimental, in good faith and for a reasonable time, though it may show that the invention *is in fact complete,* does not affect the exclusive rights of the inventor or constitute a dedication to the public."

The attention of the Court is also called to the testimony of Mr. Berliner (Record, pp. 240-242), wherein he clearly shows that his apparatus, claimed in claim thirty-five, involving the method of claim five, was never sold until 1894, and that prior to that time, there had never been any public use of it.

The Franklin Institute Lecture of May 16, 1888.

We would first call attention again to this lecture (R. p. 245, etc.), which shows that a large portion of it was devoted to a *scientific review of the development of the talking machine art.* Mr. Berliner then describes his method of producing etched sound records, devoting a considerable portion of the lecture to this subject. He then refers to the recording apparatus for making the records, and to the reproducing apparatus (See Record, p. 267). He states:

> "In having attempted, therefore, to do justice to all sources of error, I am not yet prepared to say that my present recording apparatus is constructed and adjusted to the greatest attainable correctness.

"Those who are familiar with the tediousness of original research, will admit that a new subject of this kind cannot be solved in its entirety within the space of a few months, and what I bring before you to-night, being the hasty results of a new machine finished but ten days ago, should be measured rather by the possibilities it opens than by the results so far attained, whatever merit you may accord to them.

"My impression, however, is that there is very little of lost or added motion in my present apparatus, and whatever imperfections may exist must be looked for *in the mode of reproducing the sound* rather than in the recorder. (Fig. 2.)"

Defendant's counsel contended in the Court below that the Circuit Court erred in its understanding of this statement above quoted, on the ground that the above statement quoted referred to the *recording* machine, and not to the *reproducing method and apparatus.*

That defendant's counsel is the one who errs in this matter, and not the Court below, is clear from careful reading of the above quotation from Mr. Berliner's lecture, as it is obvious that Mr. Berliner was referring not only to the recorder, but particularly to the *reproducing,* when he apologizes for the hasty construction of the devices. The last clause shows that while there is very little lost or added motion in the recordng apparatus, it specifically states, "whatever imperfections may exist must be looked for in the mode of reproducing the sound rather than in the recorder. (Fig. 2.)" Figure 2 referred to, is shown in the centre figure of page 269 of the Record.

It is apparent that Mr. Berliner did consider, as shown by his statements in this lecture, that the *reproducing* of sound by that apparatus before that audience on that evening was of an *experimental character.*

The reproducing machine which he exhibited that

night embodied his invention of the apparatus claimed in claim thirty-five, of the patent in suit, and operated by the method of claim five, both of which were invented, as hereinbefore shown, by him in November, 1887. He refers, in fact, in this lecture (p. 270) to the description of November 12, 1887, which was the publication in the "Electrical World" (Record, p. 243), wherein he had described his invention at that early date. It is true, he did give credit to Werner Suess, his assistant, in this lecture (p. 270) for having *suggested* a particular method of pivoted arm for carrying out the Berliner invention of November, 1887, claimed in claims five and thirty-five, but this, the Suess contribution, was a mere improvement in the specific construction in a device embodying Berliner's invention, and was so recognized and never disputed by Mr. Suess. When Suess applied for the United States Patent, No. 427,279 (Record, p. 446), he made no effort to claim Berliner's invention, but limited himself to minor specific constructions, such as a counterbalanced arm, and a "lazy-tongs" construction of pivoted arm.

A Test Before a Scientific Body.

Under the heading of "Demonstrations" (R. p. 268), Mr. Berliner states in this lecture:

> "While the plate is being etched, I will now let you listen to some phonautograms which I prepared in Washington within the last two weeks." * * * "In reproducing the sound I find that it is louder with hard contact substances, like metal, than with soft ones like rubber or plaster of Paris. Hard metals, like copper, nickel or brass, sound louder than zinc or type metal, but the scraping sound, which is due to friction, is also increased unless the record surface is smooth and very highly polished."

Mr. Berliner then, according to his deposition (R. p. 232, Q. 13), stated that he produced a number of records on the apparatus which is illustrated in the centre figure of his lecture (R. p. 269).

It is clear from this lecture (Record, p. 272) that it was Mr. Berliner's intention to adapt the machine, among other things, for *use in public halls*. He states (Record, p. 272):

> "Addresses—congratulatory, political, or otherwise—can be delivered by proxy so loudly that the audience will be almost as if conscious of the speaker's presence.
>
> "A singer unable to appear at a concert may send her voice and be represented as per program, and conventions will listen to distant sympathizers be they thousands of miles away."

This scientific paper was subsequently published in the Journal of the Franklin Institute, issue of June, 1888. At the end of the published proceedings is the following note (Record, p. 273):

> "At the close of the paper and after the exhibition of the apparatus, Prof. E. J. Houston moved a vote of thanks to M. Berliner for his interesting and valuable communication. The motion was carried unanimously and the meeting was adjourned."

It is manifest that the use of this apparatus in this hall, on the evening of May 16, 1888, was of an *experimental character*, to test its efficiency before a scientific body of men, not only from a phonetic standpoint, but also to test its ability and capacity to fill a lecture, or concert hall, so that the sounds could be heard by all those present, even to the remote parts of the hall.

The evidence of the lecture itself is the strongest possible evidence of the experimental character of the

demonstration. This is further corroborated by Mr. Berliner's deposition in the Record (pp. 240, etc.), where he shows (Q. 6) **that the invention was not sold, or put in public use, to his knowledge, in this country until the autumn of 1894.** On cross-examination (Record, p. 241, XQ. 11), he states:

> "By 'public use' I mean any other use but of my own and my assistants of the laboratory."

He also states (XQ. 12), he understood by "public use" the use in public of an invention for profit. It was clearly never Mr. Berliner's intention to give the invention to the public prior to having filed an application for a patent.

The fact that Mr. Berliner's Franklin Institute lecture was subsequently published, can have no bearing upon the question of whether the act of producing a record upon the apparatus on the evening of May 16, 1888, before a scientific body, constituted a public use, such as contemplated by the statute. If the publication of the Franklin Institute lecture proved anything, it would rather tend to prove the complainants' contention that the demonstration was of an experimental character, as the lecture shows on its face the demonstration was of an experimental character.

Re Authorities.

If an inventor allows his invention to be used by others generally, either with or without compensation, then it will be "in public use" within the meaning of the statute.

Exceptions to this rule are:

Where the use is experimental;

Where it was piratically, or fraudulently obtained.

Authorities re Experimental Use.

Walker on Patents, Sec. 95 (4th Ed.), states:

> "Experimental use is never public use within the meaning of the statute, if it is conducted in good faith, for the purpose of testing the qualities of the invention, and for no other purpose not naturally incidental to that.
>
> "In such a case it is immaterial whether the experimental use disclosed a necessity for improvement, or disclosed no such necessity; and it is also immaterial whether the use was conducted with secrecy or not."

Mr. Walker (Sec. 95) also states, after referring to Elizabeth *v.* Pavement Co., 97 U. S., 134:

> "Indeed, Judge John Lowell went still further in the direction of liberally allowing scope to experimental use, and decided that such use is not public use within the meaning of the law, where, in order to test its comparative as well as its absolute utility, and in order to convince others of its merits, an inventor allows them to use his invention after he has himself become satisfied that it is useful."
>
> (Citing Sinclair *v.* Backus, 5 Bann. & Ard., 81, 1880.)

Mr. Walker also then shows that where the main object was profit, and the improvement was only an incidental aim, the use might not be regarded as experimental, though incidental profit is not inconsistent with the use being experimental.

It must also be clear that the use was experimental. In the present case, however, the Franklin Institute lecture itself shows, by a careful reading of it, that the single demonstration, on the evening of May 16, 1888, by Mr. Berliner, was of this experimental character. Mr. Berliner's evidence that the invention was not put out to the public, or sold, until the

autumn of 1894, and his intent, gathered from his evidence, is also strong proof of the experimental nature of the demonstration on the evening referred to.

Where an invention is in a complete form, and is not subsequently changed, an experimental use, more than two years before the application, certainly does not come within the statute. (See Elizabeth *v.* Pavement Co., 97 U. S., 134; Walker on Patents, Sec. 95, etc.)

Where a minor completed invention, which requires no experiment to demonstrate its capacity, is used in connection with a large machine, which is being experimented with, in such a case as where the car has been used in public, the minor invention has been held to have been in public use, for the reason that its use was not of an experimental character. This is the case of Thomson-Houston Electric Co. *v.* Lorain Steel Co., 110 Fed. Rep., 654, referred to by the defendant. The patent was to Van Depoele, Patent No. 390,921, for commutator brush, the essential feature of which was the use of carbon as the material for the brush. It was shown that for more than two years prior to the date of the application for this patent, Van Depoele had constructed a cable across an empty lot, on which a car was suspended, with a motor started by a generator in the factory. On the car was an automatic reverser. On this car, which Van Depoele was experimenting with, he used one of these carbon brushes, claimed in the patent. The car, having this carbon brush as an auxiliary part of the mechanism on it, was run across the lot for four or five weeks prior to the statutory period, whenever there were visitors at the works.

The use of the carbon brush was shown by Judge Lacombe in deciding the case, not to have been, in any manner, experimental, but that the experiment

was with the new car or "telpher." The carbon brush merely performed its function in the operation of the motor, and there was nothing experimental about the use of this carbon brush.

IF the nature of the invention is such as to require test and demonstration before others, such a use before the invention is put on sale, is not a public use, within the meaning of the Statute.

Even if a price were charged for the device during such use, numerous decisions have held that this would not bring it within the statute, under the circumstances.

Walker on Patents, Sec. 96, states:

> "If, however, the nature of the invention is such that the inventor is obliged to put it into the hands of others for crucial experiment, he may sell specimens to those others for that purpose, and such a sale will not be obnoxious to the law now under consideration."
>
> (Citing Graham *v.* McCormick, 5 Bann. & Ard. 244; Graham *v.* Mfg. Co., 11 Fed. Rep., 142.)

The very character and nature of the device claimed in the Berliner Patent in suit required test, experiment and demonstration before hearers, in order to ascertain its qualities and capabilities, and to ascertain whether it required change or improvement. The device was designed, among other things, for lecture and concert halls. How else could its capabilities and phonetic capacity be fully known by the inventor than by testing and experimenting with it before an audience in a hall? That Mr. Berliner was uncertain as to its ability to accomplish all that he desired, is evidenced by the lecture itself, when he states (Record, p. 267), before giving the demonstration:

"My impression, however, is that there is

> very little of lost or added motion in my present apparatus, and whatever imperfections may exist must be looked for in the mode of *reproducing* the sound, rather than in the recorder. (Fig. 2)."

In the case of Shaw *v.* Cooper, 32 U. S., 292, cited by the defendant, while the principles enunciated in the decision are in accordance with the complainants' contention, the facts in that particular case required the Court to hold that the invention had been in public use, as cited by the Court, p. 322:

> "For three years before the emanation of this patent, his invention was in public use, and he appears to have taken no steps to assert his right."

In the case of Egbert *v.* Lippman, 104 U. S., 333, referred to by defendant, while the facts justified a finding that there had been a two years' public use with the consent and allowance of the inventor, the principles and exceptions laid down by the Supreme Court, when applied to the case at bar, would clearly show that there was no public use by Mr. Berliner. The Court said:

> "Nevertheless, if its inventor sells a machine of which his invention forms a part, and allows it to be used without restriction of any kind, the use is a public one, within the meaning of the law. So, on the other hand, a use necessarily opened to public view, if made in good faith, solely to test the qualities of the invention and for the purpose of experiment, is not a public use within the meaning of the patent law."
>
> (Citing Elizabeth *v.* Pavement Co., 97 U. S., 126; Shaw *v.* Cooper, 32 U. S., 292.)

Berliner certainly comes within this exception.

In Elizabeth *v.* Pavement Co., 97 U. S., 126, Mr. Justice Bradley, in commencing the consideration of the question relative to alleged public use, states:

> "It is perfectly clear, from the evidence, that he did not intend to abandon his right to a patent."

And then shows that the use of the Nicholson pavement in Boston, on one of the public streets, for a space of about six years before he filed his application for his patent, was experimental, and for the purpose of testing its qualities, and could not be construed as a public use. Mr. Justice Bradley further states:

> "The use of an invention by the inventor himself, or of any other person under his direction, by way of experiment, and in order to bring the invention to perfection, has never been regarded as such a use. Curt. Pat., Sec. 381; Shaw *v.* Cooper, 7 Pet. 292."

Defendant endeavors to distinguish the present invention from the street pavement, upon the ground that this is a machine, and could be tested privately.

In this connection, Mr. Justice Bradley stated:

> "When the subject of the invention is a machine, it may be tested and tried in a building, either with or without closed doors. In either case, such a use is not a public use, within the meaning of the statute, so long as the inventor is engaged, in good faith, in testing its operation. He may see cause to alter it and improve it or not. His experiments will reveal the fact whether any and what alterations may be necessary. If durability is one of the qualities to be obtained, a long period, perhaps years, may be necessary to enable the inventor to discover whether his purpose is accomplished. **And though, during all that period, he may not find that any changes are necessary, yet he may be justly said to be using his machine only by way of experiment;** and no one

would say that such a use, pursued with a *bona fide* intent of testing the qualities of the machine, would be a public use within the meaning of the statute.

"So long as he does not voluntarily allow others to make it and use it, and so long as it is not on sale for general use, he keeps the invention under his own control, and does not lose his title to a patent.

"It would not be necessary, in such a case, that the machine should be put up and used, only in the inventor's own shop or premises. He may have it put up and used in the premises of another and the use may inure to the benefit of the owner of the establishment. Still, if used under the surveillance of the inventor, and for the purpose of enabling him to test the machine and to ascertain whether it will answer the purpose intended, and make such alterations and improvements as experience demonstrates to be necessary, it will still be a mere experimental use and not a public use, within the meaning of the statute.

"Whilst the supposed machine is in such experimental use, the public may be incidentally deriving a benefit from it. If it be a grist mill, or a carding machine, customers from the surrounding country may enjoy the use of it by having their grain made into flour, or their wool into rolls, and still it will not be in public use, within the meaning of the law."

Mr. Justice Bradley also pointedly states in the opinion:

"It is not a public knowledge of his invention that precludes the inventor from obtaining a patent for it, but a public use or sale of it."

It is respectfully submitted that this portion of the decision most aptly applies to the case at bar, and that the citation of further authorities is unnecessary.

The device of the patent in suit is a talking machine, and method of reproducing sound; certainly to

fully test the efficacy of a sound producing machine, it must be listened to by hearers; not by a single hearer, or two or three, but if it is designed for public halls for concert and like purposes, it must be experimented with in a hall and before a body of people to properly ascertain its effect upon the hearers as an assembled body. Therefore, the experiment with the apparatus could not be conducted in the absence of an audience, in a cellar, or in a dark closet, but must be with unclosed doors before an audience. While it is true that some machines might be tested privately, such as a printing press, or a spinning machine, a talking machine, from its very nature, in order to be properly experimented with and tested must be demonstrated before hearers.

Robinson on Patents, relative to experimental use not being a public use, states (Vol. 1, Sec. 355):

> "A use which is experimental, or is designed to test the capability or merits of an art or instrument, is not a use from which abandonment can be inferred. Such use assumes that the inventor does not yet regard his own idea of means as perfectly developed, *or fears that his embodiment of it is not adapted to its full expression; and therefore his experimental use of the invention,* whether in public or in private, and for however long a time continued, *indicates no intention to surrender it to the public,* but, on the contrary, a design to retain entire control over it for the purpose of completely realizing his idea. That from a use like this benefit accrues indirectly to the public, or some advantage is obtained by the inventor, does not change its character. A use clearly experimental, in good faith and for a reasonable time, though it may show that **the invention is in fact complete,** does not affect the exclusive rights of the inventor or constitute a dedication to the public."

Lyman *v.* Maypole, 19 Fed. Rep., 735;

Sprague *v.* Smith & Griggs Mfg. Co., 128 Fed. Rep., 721;
Smith & Griggs Mfg. Co., *v.* Sprague, 123 U. S., 249.

An experimental use of apparatus employed in the process more than two years before the application for the process patent is no abandonment of the process.

Eastern Paper Bag Co., *v.* Standard Paper Bag Co., 30 Fed. Rep., 63;
Emery *v.* Cavanagh, 17 Fed. Rep., 242.

In the case of Harmon, *et al.*, *v.* Struthers, *et al.*, 57 Fed. Rep., 637, an inventor of an improvement in reversing gearing for engines, without profit to himself, and for the sole purpose of advertising the efficiency of his invention by practical use, placed his device on engines manufactured by his employers, who sold them with a view to experimental use.

Judge Acheson, in delivering the opinion of the Court, held that there was no public use of the invention within the meaning of the statute. (See cases cited in the decision.)

The attention of the Court is also called to the consideration of this question in the Am. & Eng. Enc. of Law, 2nd Ed., Vol. 22, p. 338:

> "*Experimental Use.*—Use, even in public, merely for experimental purposes, is not a public use within the statute, and will not defeat a subsequent patent, though such use may have continued for considerably more than two years named in the statute. So long as the inventor is engaged in good faith in testing the operation of his invention, though the test may extend over a period of years, *and though no changes may be made*, the use is merely experimental and not public, within the meaning of the statute, and it is immaterial that while the device is in such exper-

imental use the public may be incidentally deriving a benefit from it, or that there is an incidental sale of its products, or an incidental profit."

— (See Lyman *v.* Maypole, 19 Fed. Rep., 735.)

In the case of Railway Register Manufacturing Company *v.* Broadway Co., 22 Fed. Rep., 655, it was held, in an opinion by Judge Wheeler (Southern District of New York), that the public use of the cash register, according to the evidence, upon street railway cars, was the only manner in which they could be conveniently used for the purpose of actual experiment to ascertain the best mode of construction, and that this was permissible and would not bar a patent.

In the case of Ennis *v.* Oil City Boiler Works, 22 Fed. Rep., 780, it was held by Judge Acheson (Western Dist. of New York) that a single sale by an inventor of a machine embodying his complicated invention, more than two years before his application for a patent, will not render the patent void where such a sale is made for less than the value of the machine, without profit to the inventor, for the sole purpose of testing it, and with the understanding that it will be taken back if it does not work satisfactorily.

If necessary, in making tests, an inventor may sell a machine on trial, so as to get it fully and fairly tested in practical use, by the class of persons for whose use it is intended, and such sale or use, even for more than two years, if made for the purpose of practical test, will not be a sufficient sale or public use to invalidate the patent.

See Graham *v.* Geneva L. C. M. Co., 11 F., 138.

The Defendant's Brief may refer to the case of Manufacturing Co. *v.* Sprague (123 U. S., 249). That

case contains a very full review of the decisions, and while the facts in that case warrant, the holding that there was a public use, the facts were very different from the facts of the present case. The principles of law therein set forth are the same as contended for herein by the complainant, and Mr. Justice Matthews quotes therein from the decision in the case of Elizabeth *v.* American Nicholson Pavement Company (97 U. S., 126) at length, with approval, among other portions, that portion of the pavement case which states:

> "And though during all that period *he may not find that any changes are necessary*, yet he may be justly said to be using his machine only by way of *experiment;* and no one would say that such a use, pursued with a *bona fide* intent of testing the qualities of the machine, would be a public use within the meaning of the statute."

The facts in Manufacturing Company *v.* Sprague, show that the prior public use was from the fall of 1874 until the fall of 1877, more than two years prior to the filing of the application on December 2, 1878, and that the complainant had the patented device in use *for the purpose of profit* in his business, operated in his business, operated in his factory by his workmen for the production of Arctic overshoe buckles. It is, therefore, apparent that there was here a use for a period of three years for profit in business. Of couse, under such circumstances, the experimental character of the use must have been proved by the strongest kind of evidence, as such a use was palpably contrary to the theory of experiment.

Full Evidence of the Experimental Character of the Use.

In the present case, however, the alleged public use consisted in a *single act* on the evening of May 16,

1888, in the course of a scientific lecture, before a scientific body, and for which no charge was made.

We submit that the evidence of the lecture itself, and of the circumstances surrounding the demonstration before this scientific body, *to which the public were not admitted,* is the strongest kind of evidence, of the fullest and most convincing character, that this single demonstration on this particular evening before this particular body in the course of this scientific lecture was of an *experimental character.*

No further evidence was necessary, though Mr. Berliner's deposition clearly shows that there was not, and could not have been, and was not intended to have been, any public use in the statutory sense of this invention at that time.

It was clearly a *bona fide* test, of an experimental character, of an invention which the inventor in his lecture (Record, p. 267), stated in referring to that reproducing apparatus, before trying it before these scientific men:

> "and whatever imperfections may exist must be looked for in the mode of *reproducing* the sound rather than in the recorder."

There was clearly no public use of this invention, and there is nothing in the law which required Berliner to file his application for the patent in suit before the date he did file it in March, 1892.

If this Franklin Institute lecture or the demonstration in his bed room at the hotel in New York, constituted a public use, then the inventor was obliged to file his application within the two year period; if, however, it was not a public use—which it was not—the fact that he did not file the application for the patent in suit until after the period of two years had elapsed cannot affect the validity of his patent.

The evidence of the experimental character of Berliner's demonstration of his reproducing apparatus on the evening of May 16, 1888, on the occasion of the delivery of his scientific lecture relating to the subject before a scientific body, in a hall to which the public were not admitted, is full, clear and unequivocal.

That this use could not constitute a public use, such as contemplated by the statute is decided by the authorities herein cited.

Re Alleged Prior Public Use in Mr. Berliner's Bedroom.

The new alleged prior public use set out by this defendant purporting to be proven in the affidavits of T. C. Martin and Joseph Wetzler, in Record, pp. 191-194, is to the effect that Mr. Martin and Mr. Wetzler, about a week prior to March 18, 1888, visited Mr. Berliner's bedroom, in the Union Square Hotel, New York City, and that he there played several records for them on a machine similar to that illustrated in the "Electrical World," of March 18, 1888, and that Mr. Wetzler subsequently wrote the article published in the said paper of that date.

It is respectfully submitted that this could, in no sense or manner, be constituted a *public* use within the statute, but, if anything, was nothing more than a *private* demonstration in Mr. Berliner's bedroom to two guests.

It is submitted that the authorities hereinbefore cited, abundantly prove that this could in no manner be considered as a public use within the statute.

POINT FOUR.

Under this point in the petition for *certiorari* (p. 23), and under Point Six (p. 115), in defendant's brief in the U. S. Court of Appeals, a copy of which is attached to said petition, the defendant contends by reason of the issuance of the Suess Canadian Patent No. 41,901, of February 11, 1893 (R. p. 155) to Berliner, that Berliner is now estopped from claiming that claims five and thirty-five of the patent in suit cover the broad principle of Berliner's invention, for which the complainants contend, and to which, the U. S. Circuit Court of Appeals has decided, he is entitled.

The defendant makes this contention, for the reason that in addition to illustrating, describing and claiming the Suess invention as illustrated, described and claimed in the U. S. Patent to Suess, No. 427,279 (R. p. 446), it also contained two or three broad claims the language of which, it was contended, was broad enough to cover the apparatus and process of claims five and thirty-five of the patent in suit.

The Suess-Canadian Patent Considered.

The drawings of the Canadian Patent are identical with the drawings of the Suess U. S. Patent, 427,279. (Stipulation, R. p. 541.) The specification is printed in the Record on pages 157 to 186. It states:

> "My invention has reference to improvements in the reproducing apparatus, adapted for use in the method of recording and reproducing sounds **heretofore invented and published by Emile Berliner.**"

The application was filed on December 7, 1895, and was never amended, or changed. (See Lyon's Affidavit, Record, p. 314).

It will be remembered that Mr. Berliner's invention

of claims five and thirty-five was "PUBLISHED," as stated in the Suess-Canadian specification, in the "Electrical World," of November 12, 1887 (R. p. 243), which publication was known to Mr. Suess, as he was present on May 16, 1888, when Mr. Berliner delivered his Franklin Institute lecture in Philadelphia, describing this, his, Berliner's invention, when he, Berliner, stated, referring to the "Electrical World." "In the description of November 12, 1887, I advanced the idea of mounting the sounder on a carriage and rails and have the record groove itself to be the screw which was to guide the point of the stylus across the disc from periphery to centre."

Mr. Berliner then stated that this had been improved upon by Mr. Werner Suess, who was present with him there that evening, at the time of the delivery of the lecture, by pivoting the arm carrying the reproducer, instead of carrying the reproducer on a suspended rail, as illustrated, for instance in Fig. 10 of Patent No. 564,586.

This publication of the "Electrical World," of November 12, 1887, also stated on page 255 (R. p. 243):

> "If now the engraved record is rotated with uniform speed, and the stylus be held in the groove, the end of the stylus will be forced to follow the undulations of the groove, and any vibratory surface attached to the stylus will be vibrated positively in both directions, in strict accordance therewith; and will, therefore, reproduce the exact sounds which originally produced the record."

The "Electrical World" further states (R. p. 244), after describing one way to mount the phonautogram:

> "Another way is to mount the phonautogram on a circular, wooden, resonant box, which simply rotates without progressive motion, and to press an ivory point into the groove. In this case the hand which holds the ivory easily follows the

groove, and the point is led along the volute of the record, and vibrates the sound box by undulatory shocks.

"This suggests the plan of mounting the reproducing diaphragm and stylus on a carriage moving on rails, and permitting the point of the stylus not only to vibrate, but also to push the carriage across the revolving disc, and thereby follow the volute of the sound record.

"Mr. Berliner believes that it is more than likely that the gramophone is destined to fulfill many of the expectations which were placed ten years ago on the phonograph, and which are partly realized by the graphophone——"

Mr. Suess, in making this statement hereinbefore quoted in the specification of his Canadian application, which was sworn to by him on April 13, 1891, specifically recognizes Mr. Berliner as the inventor of this invention which had been thus published, among other places, in the "Electrical World" November 12, 1887, and a description of which invention was also published in the Journal of the Franklin Institute in June, 1888, the lecture having been delivered May 16, 1888. (See R. pp. 254 to 273.) It will be noted on page 273 of the record, that at the conclusion of this interesting paper before the Franklin Institute, the well-known electrical inventor, Dr. E. J. Houston, moved a vote of thanks to Mr. Berliner "for his interesting and valuable communication."

The "main features" of the Suess-Canadian relate to details of construction.

The attention of the Court is directed to this Suess-Canadian application (assigned to Mr. Berliner), a careful reading of which will show that Mr. Suess did not claim to be the inventor of this broad invention, but *admitted Mr. Berliner's prior invention,* and, in effect, stated that the features of his, Suess', present inven-

tion in this Canadian application related to certain detail improvements.

Among other improvements, the specification notes, first, that as the weight of the intensifying horn is carried by the reproducer, it should be supported and balanced, so that the recording stylus "will bear with light, but sufficient pressure upon the record tablet."

His other feature is a lazy-tongs construction of frame for making the stylus travel in a straight radial line.

The means which he shows for counterbalancing is illustrated in Fig. 1 of the Suess U. S. Patent, No. 427,279 (R. p. 446), of which the Canadian drawings are a copy. The means for making the path of the stylus travel in a straight radial line are shown in Fig. 3 of the drawings, having a lazy-tongs construction.

The specification then describes in detail the constructions illustrated in the drawings.

The specification contains no broad statement of invention whatever, and is confined to the details referred to.

Claim eleven, while broadly worded, if valid at all must, in view of the admission in the specification of Mr. Berliner's invention, and in view of the statement that the main features of the Suess invention refer to certain details be narrowly interpreted. Claim eleven, which is the most broadly worded claim of the patent, reads as follows:

> "11. In an apparatus for reproducing sounds from a rotating record tablet, a reproducing stylus mounted to have a free movement over the surface of the record tablet, substantially as described."

The words "substantially as described," it is submitted, should be understood as limiting this claim, if it is valid at all, to the lazy-tongs construction illustrated in Fig. 3 for making the reproducing stylus travel in a straight radial line across the record tablet.

Claim five reads:

> "5. In an apparatus for reproducing sounds from a record tablet, the combination with a reproducer mechanism consisting of a sound conveying tube and a diaphragm and stylus mounted at one end of the tube, of a **freely swinging supporting frame** for the said reproducer mechanism, substantially as described."

In view of the statement that the main feature of the invention, other than the counterbalancing feature, was the mechanism for making the path of the stylus across the face of the record disc as nearly as practicable a straight radial line, the words of the claim, "of a freely swinging supporting frame for the said reproducer mechanism, substantially as described," evidently refer to the lazy-tongs construction shown in Fig. 3 of the drawings.

Even if it referred broadly, to the pivoted swinging arm, it would not conflict with claims five and thirty-five of the patent in suit, as those claims have no such restrictions, or requirements, in them.

Claim seven of the Canadian Patent reads:

> "7. In an apparatus for reproducing sounds from a record tablet, the combination with a reproducer mechanism consisting of a sound conveyer, and a diaphragm and stylus mounted at one end thereof, of a supporting frame for the said reproducer, **loosely pivoted to swing freely both laterally and vertically,** substantially as described."

The same comment directed to claim five also applies to claim seven.

Claim twelve, which need not be quoted, specifically includes "a swinging lever system," referring to the lazy-tongs construction of Fig. 3 of the drawings, as does also claim thirteen include "a lever system" referring to the same construction.

It is, therefore, apparent that this Canadian Patent was not intended for any broader invention than the Suess U. S. Patent, No. 427,279, and did not describe any broader invention than that patent; the Circuit Court in the Graphophone Case (R. p. 68, fol. 203), affirmed by the Circuit Court of Appeals, held in this connection:

> "The primary object of Suess, an employee of Berliner, however, was merely to construct a suitable pivotal support for the diaphragm and stylus, so as to assist such device in its passage across the record. It is expressly stated in the specification of the Suess Patent that the invention relates to improvements in the reproducing apparatus of Berliner, and that the construction and mounting of the stylus form no part of the invention."

We submit that Judge Townsend in the Court below was right in granting the preliminary injunction, though he was apparently mistaken in his conclusion where he stated (R. p. 325), "the Canadian Patent in terms describes and claims the broad generic invention of Berliner covered by the claims here in suit."

Defendant's counsel apparently bases his whole contention relative to this Suess Canadian Patent upon claim eleven.

It is upon the basis of this claim, or these claims, notwithstanding the true and proper interpretation of the specification which should be given to them, defendant contends that the fact that these claims (interpreted as defendant interpret them), were inserted in the Canadian Patent, conclusively proves that, as Berliner was the assignee of this application, Berliner thereby admitted that Suess, and not he, was the inventor of claims five and thirty-five.

It is respectfully submitted that there is no warrant in this Canadian Patent for this assumption, but that the evidence is conclusive, as adjudicated by this

Court in the Graphophone Case, that Berliner was the inventor as early as November, 1887 (Rec. p. 73), and there is no evidence in this case to affect that decision.

The defendant contends that thus its interpretation of the Canadian claim eleven must affect the interpretation of claims five and thirty-five, which should, therefore, be narrowly restricted, which connection we submit is without foundation.

The fact that Berliner subsequently applied for and secured his Canadian Patent No. 55,079, for his invention in suit, containing claims 5 and 35, corresponding in all material respects in drawings, specification and claims to the patent in suit, No. 534,543, is, we submit, further conclusive evidence that Berliner did not consider that the Suess Canadian Patent contained his invention of the patent in suit, otherwise he would not have subsequently patented it, as he did.

The Berliner Canadian Patent, No. 55,079, was applied for by him December 7, 1895, and issued February 24, 1897 (R. pp. 314-317). It is admitted that this Canadian Patent is identical with the patent in suit (R. p. 541, Fol. 1622).

The defendant's contention under Point Four is in effect, that as the Suess-Canadian Patent included claim eleven, and was applied for by Berliner as assignee of Suess, it is proof that Suess *anticipated* Berliner, and that claims five and thirty-five are, therefore, invalid. As hereinbefore pointed out, there is no proof in the Suess-Canadian patent that Suess was the inventor of the subject matter of claims five and thirty-five, and there is on this point no material evidence which was not before the Court of Appeals and the Circuit Court in the Graphophone Case.

Suess never claimed to be the inventor of the Ber-

liner invention claimed in claims 5 and 35, **and always acknowledged Mr. Berliner, either directly, or indirectly, as the inventor as shown by the foregoing facts.** Mr. Suess admitted, in his U. S. patent, that what he claimed was a mere improvement on Mr. Berliner's invention. Mr. Suess was an employee of Mr. Berliner in May, 1888, and was present at the Franklin Institute lecture of May 16, 1888, assisting Mr. Berliner when Mr. Berliner described the said invention as his invention, crediting Mr. Suess, however, for the suggestion of the detailed pivot mounting (R., p. 270, fol. 809). The details of Mr. Suess's invention were claimed in the Suess U. S. patent, and nothing else. In the said Franklin Institute lecture, Mr. Berliner refers to his prior disclosure, of November 8, 1887, in the "Electrical World," of his broad invention. Mr. Suess was not in his employ at that date (see Berliner's Test., R., p. 236, XQ. 29). All Mr. Berliner's acts were thoroughly consistent with the facts that he was the inventor of the broad invention of claims 5 and 35, and in his application for his, Berliner's, Canadian Patent, No. 55,079, filed December 7, 1895, by Mr. Berliner, corresponding in all material respects to the Berliner U. S. Patent, No. 534,543, he inserted claims similar to claims 5 and 35.

It is respectfully submitted that Mr. Berliner's acts are thoroughly consistent with his claim for his invention dating back to November 7, 1887, and that there is nothing in the Suess-Canadian patent which could in any manner operate to estop Mr. Berliner from maintaining this claim as contended for by the defendant under Point 4.

POINT FIVE.

Under Point Five of the petition for *certiorari*, and Point Seven of defendant's brief in the U. S. Court of

Appeals, which is attached to the said petition, the defendant claims that this Berliner-Suess Canadian Patent is incontrovertible proof of abandonment by Berliner (defendant's brief attached to petition for *certiorari*, p. 130).

The defendant claims that if Berliner, prior to the date of the Suess-Canadian application, had had any claim to claims five and thirty-five, he abandoned the invention when, as assignee of Suess, he made the application in Canada for the patent.

The cases the defendant cites does not support this proposition, and, as pointed out in this brief under Point Four, there is no foundation whatsoever for this contention of defendant.

The Suess-Canadian Patent in the specification, and drawings, was as narrow and as restricted as the Suess U. S. Patent, No. 427,279 (R. p. 446), which the Court in the Graphophone Case decided was for an improvement on the Berliner invention, and not for the broad claim of the Berliner invention.

In fact, if anything, the Canadian specification even more specifically admits Berliner's broad invention, as hereinbefore pointed out, as it states:

> "My invention has reference to improvements in the reproducing apparatus adapted for use in the method of recording and reproducing sounds **heretofore invented and published by Emile Berliner.**" (Record, p. 157, fol. 471.)

This is a broad and far reaching statement.

It is shown too by Suess, and if the defendant's contention is true, that it is acquiesced in by Berliner because he was the assignee, this statement also would naturally be acquiesced in by Berliner.

The only means shown and described in the Suess Canadian Patent for traveling the reproducing stylus in a straight radial line, is the "lazy-tongs" construction

shown in Fig. 3 of the drawings. When the straight arm shown in Fig. 1 of the drawings, was used with the counter-balancing weight, the reproducing stylus did not travel in a straight radial line, as shown in the Canadian specification (R. pp. 161 and 162), where it states, fol. 483:

> "As the rotation of the tablet is continued, the convolutions of the record groove will cause the stylus to be slowly drawn across the tablet, turning the entire support of the reproducing apparatus on its pivot bearing, the said stylus moving along a *slightly curved path* over the said tablet."

Fig. 1 showed the improvement relative to the adjustable counter-balancing weight.

The only construction for making the reproducer travel in a straight radial path, is that shown in Fig. 3, with an articulated frame so arranged that the stylus will travel in the path of the straight dotted line shown in the lower portion of Fig. 3. The specification states, in describing this (R. p. 163, fol. 488):

> "The outer ends of the links 50, are pivoted to opposing corners of an articulated frame 51, composed of links 52, of equal length, connected together at the ends by pivot pins 53, 54, 55, and 56, respectively, the pins 54 and 55 also connecting the links 50, to the frame at the points before mentioned.
>
> "The pin 56, also pivotally connects one end of a link 57, to the corresponding corner of the frame 51, the other end of the said link being pivoted to the outer end of the arm 44.
>
> "The frame 51, together with the links 50, and 57, constitutes a well-known mechanical movement, by which a curvilinear movement is converted into a rectilinear movement, provided the various links have the proper relative lengths; which is supposed to be the case in this instance, and, therefore, no detailed description of the operation thereof is deemed necessary."

If these claims five, seven or eleven should be broadly interpreted, as contended for, the mere fact that this Canadian patent contains such claims could not possibly prove abandonment by Berliner of his invention of claims five and thirty-five, merely because he happened to be the assignee of the application and patent.

The specification was not executed, or sworn to, by Berliner, but by Werner Suess. The fact that the application was conducted in the interests of Berliner, by reason of the assignment to him by Suess, certainly cannot be construed to operate on such grounds as these, as an abandonment by Berliner of his invention.

Berliner had long previously placed himself indisputably upon record as the inventor of claims 5 and 35 and was so recognized by the scientific public. The great scientific institute, the Franklin Institute, recognized his invention and honored him with an invitation to address the society upon the subject in May, 1888.

Further, the proofs in this case are conclusive that Berliner was the inventor of the invention as early as November, 1887 (R. p. 73), and he so declared himself to be such *in the presence of Suess* in his lecture of May 16, 1888, at the Franklin Institute.

Suess never controverted this proposition, but on August 16, 1889, considerably over a year after the Franklin Institute lecture, filed his application for U. S. Patent No. 427,279 (R. p. 446), in which he laid no claim to being the inventor, and in which he restricted his invention to five narrow, limited claims.

The Suess Canadian Patent was filed by Suess, May 25, 1891, over a year and a half after the filing of the Suess application for the U. S. Patent.

The Suess U. S. Patent was also assigned to Mr. Berliner *before issue,* and if Mr. Berliner regarded

Suess as the inventor of claims five and thirty-five he would have had such claims incorporated in the Suess U. S. Patent, in order that this most important invention should be protected properly.

The Berliner Canadian Patent for the Invention in Suit Filed December 7, 1895.

On December 7, 1895, Mr. Berliner applied for a Canadian Patent with the same drawings, description and claims as the patent in suit, No. 534,543, which Canadian Patent was issued to him, No. 55,079, on February 24, 1897 (R. p. 315). *This is conclusive evidence that Mr. Berliner did not regard the prior Suess Canadian Patent as containing the invention of the U. S. Patent in suit, and is conclusive evidence that there was nothing in the Suess Canadian patent which was intended to convey any intention on his part, direct, or indirect,* to abandon the invention *of the patent in suit.*

Even if there had been an abandonment, which there was not, in Canada, there is no evidence of abandonment of the United States rights.

The Court in the Graphophone Case has passed upon the question of ABANDONMENT and decided that there was none; as herein shown, there is no evidence whatsoever upon which to base any different decision.

Re Alleged New Evidence That the Apparatus of Fig. 10, of the Berliner Patent No. 564,586, Was Impracticable.

The Court of Appeals passed upon the fact of the practicability of the apparatus of Fig. 10 of No. 564,586, as illustrated and described in that patent. A model constructed in accordance with Fig. 10 of that patent, was produced in evidence in the Graphophone Case,

and practically operated in Court. Mr. Berliner's testimony is also clear on this subject.

His testimony (R. pp. 230 to 238 and 239 to 240), refers to and described the construction and the operation of the apparatus shown in Fig. 10. In answer to Q. 3 (R. p. 239), Mr. Berliner produces the model marked "Complainants' Exhibit, Berliner Model," which he states:

> "is practically a copy of a *device used by me in* 1887, about the time the patent in question was filed. We did not then have a box-motor machine, and the records were larger, and the mounting of the rail on which the carriage moved was on separate posts, but otherwise this is such a construction as I then made and *successfully operated.*"

Referring to this construction, such as Fig. 10 as described in the "Electrical World" of November 12, 1887, Mr. Berliner was asked (R. p. 236, Q. 29):

> "You may state whether Mr. Suess had anything to do with inventing this construction of apparatus and method just quoted.
>
> "A. Mr. Suess was not then in my employ, and he had nothing to do with this idea."

(As shown elsewhere, Mr. Berliner meant that Mr. Suess was not in his employ at the time that he made this invention.)

Defendant's counsel contends (Brief attached to the petition for *certiorari*, pp. 140, 141, etc.), that Fig. 10 is an impracticable apparatus, although he has no evidence of this fact, and merely relied upon the assumption that the stylus 29 attached to the diaphragm casing which is secured to carriage 55 on rails 56 in Fig. 10 of patent, No. 564,586 (R. p. 465), must be absolutely perpendicular. The specification, however, states in describing this construction, "The diaphragm casing 31 is secured to a small truck 55, upon rails 56, arranged vertically above and parallel with a diameter of the

reproducing disc, and at such height above the same that the stylus 29 *will be in engagement* with the undulatory grooves of even depth which represent the record of sounds." (R. p. 469, l. 110.)

The words "will be in engagement" obviously mean that the stylus is in such a relation in engagement with the grooves in the record that it will traverse the spiral record groove from start to finish. It cannot be assumed to mean that it will be in engagement *at intervals*. To be "in engagement" throughout the length of the spiral groove, the stylus is placed at an angle slightly out of the perpendicular, with the point pointing in the direction of the travel of the record tablet, as is common in talking machines, and as, for instance, is illustrated by the stylus marked "29" in Fig. 1. Any skilled mechanic in making a construction from Fig. 10 would make it in this way, so that the point would rest or drag in the bottom of the record groove under slight tension, thus it would always be in contact, as shown by the model produced in court, which is a practical working model.

The defendant's contention, therefore, that the apparatus of Fig. 10 is impracticable, is without foundation.

There is nothing in Mr. Hunter's deposition, which defendant's counsel quotes on pages 142 and 143 of his brief, attached to the petition for *Certiorari*, in conflict with this statement. The substance of the testimony is that if in a talking machine there was no capacity for vertical adjustment, this fact would be a disadvantage. Mr. Hunter nowhere here states that there is no capacity for vertical adjustment in the construction shown in Fig. 10.

The stylus resting at a slight angle in the bottom of the groove under slight tension a portion of the weight of the suspended sound box, would, of course, have the capacity for the necessary vertical adjustment

due to any slight irregularities in the record, or turntable.

This point of the defendants, we submit, is another of the captious contentions made without any foundation in fact, but which requires some consideration here in order that the true condition of affairs may not be misunderstood.

POINT SIX.

Under Point Six of the petition for *certiorari*, and under Point Eight of defendant's brief in the U. S. Court of Appeals, a copy of which is attached to said petition, the defendant contends that Berliner Patent, No. 534,543, expired February 11, 1899, before this suit was begun, with the expiration of the term of six years, when the Suess Canadian Patent lapsed by reason of failure to pay the renewal fees.

This is the point concerning which Judge Townsend in his opinion expressed some doubt (R. p. 324, fol. 971). However, the doubt was not sufficient to preclude him from granting the complainants' motion.

It is respectfully submitted that:

1. As hereinbefore pointed out under Points Four and Five, the Suess Canadian Patent was for nothing more than the Suess improvements upon Berliner's invention of claims five and thirty-five, and that the specification did not warrant any broad claim such as five and thirty-five.

2. The fact that the Canadian Patent Office subsequently granted a Canadian Patent to Berliner, No. 55,079, for the invention of Berliner U. S. Patent in suit, is strong evidence that the Canadian Patent Office did not regard the Suess Patent as covering the invention of claims five and thirty-five, and is conclusive evidence that Berliner did not so regard it.

No matter how broad the Suess Canadian Patent may be the term of 18 years for which it was granted has not expired and the Berliner Patent in suit could not be affected.

If the Suess Canadian Patent, No. 41,901, is to be interpreted as contended for by the defendant, and as interpreted by Judge Townsend, who said that it "discloses and broadly claims the invention covered by the claims here in suit," the fact that it lapsed, or expired, on February 11, 1899, at the end of six years, by reason of the failure to pay the renewal fees, can have no effect upon the term of the Berliner U. S. Patent, No. 534,543, in suit, under the authorities.

This Suess Canadian Patent was granted "for the period of eighteen years from the date of these presents," as appears upon its face. Record, p. 156, fol. 467.)

It is also stated in the grant:

> "The partial fee required for the term of six years having been paid to the Commissioner of Patents, this patent shall cease at the end of six years from date, unless at or before the expiration of the said term the holder thereof pay the fee required for the further term or terms, as provided by law."

It is respectfully submitted, under the well-settled authorities, that in construing Section 4887 the period of the prior foreign patent to be taken into consideration with the domestic patent, is the *longest possible term of the foreign patent;* is the period of duration expressed in the grant; or, in other words, the duration of the United States patent is fixed when the United States patent issues by the longest possible term of the foreign patent, and shall not be subject to be terminated by the occurrence or non-occurrence of certain facts which would require extraneous proof.

In this connection the following authorities are cited:

Authorities Re Definiteness of Term of Foreign Patent Upon Which the Term of the United States Patent is Dependent Under Section 4887.

Throughout all the decisions it is clear that the term of the prior foreign patent must be something definite, and not left to subsequent occurrences or non-occurrences.

This question as to whether, when a Canadian patent *ceases* at the end of the first period of the term for which it is granted, by failure to pay the renewal fee, a subsequently issued United States patent for the same invention, expires also, has been decided to the effect that the United States patent does not expire, and is limited only by the *term* for which the Canadian patent was granted, namely, eighteen years, as in the present case.

Diamond Match Co. v. Adirondack Match Co., et al., 65 Fed. Rep. 803.

This was a case in the District of Vermont, decided by Judge Wheeler. A Canadian patent was granted November 13, 1884, for fifteen years, and the partial fee for five years only having been paid, the Canadian patent expired on November 13, 1889. It was contended that the U. S. patent expired at the same time. Bate Co. *v.* Hammond Co., 129 U. S. 151, was relied upon in the argument to support the contention. Judge Wheeler held, in view of the ruling in the Bate Co. case, that the U. S. patent did not expire at the end of the first five-year term of the Canadian patent, and said:

> "The term of the foreign patent seems to be the space of time during which the monopoly is placed within the patentee's control, without reference to whether he sees fit to retain it for the whole time or not. Therefore, the provision of section 4887 of the Revised Statutes that patents shall

be so limited as to expire with any foreign patent for the same invention 'having the shortest term' seems to mean the expiration of such term of the foreign monopoly as the patentee is by the grant of the foreign patent given power over and control of. By the Canadian statute now in force, the term limited for the duration of this monopoly was fifteen years which has yet several years to run. The patent in suit appears to have the same time to run."

Pohl, et al., v. Anchor Brewing Company, 134 U. S., p. 381.

Pohl *v.* Brewing Company is one of the leading cases on this subject, and the law as there expounded by Mr. Justice Blatchford is followed and quoted generally in all of the later decisions of the Supreme Court and of the Circuit Courts in cases where this question is involved.

The following is a portion of Mr. Justice Blatchford's opinion in this case, namely:

"There is nothing in the statute which admits of the view that the duration of the United States patent is to be limited by anything but the duration of the legal term of the foreign patent in force at the time of the issuing of the United States patent, or that it is to be limited by any lapsing or forfeiture of any portion of the term of such foreign patent, by means of the operation of a condition subsequent, according to the foreign statute. In saying that 'every patent granted for an invention which has been previously patented in a foreign country shall be so limited as to expire at the same time with the foreign patent,' the statute manifestly assumes that the patent previously granted in a foreign country is one granted for a definite term; and its meaning is, that the United States patent shall be so limited as to expire at the same time with such term of the foreign patent. Such term was held, in Bate Refrigerating Co. *v.* Hammond Co., to be fifteen years and not five years."

In referring in the opinion to the reasons above quoted, Mr. Justice Blatchford further states:

> "This view is made conclusive by the requirement of Section 4887, that if there be more than one prior foreign patent, the United States patent shall be so limited as to expire at the same time with that one of such foreign patents 'having the shortest term.' This means the foreign patent which, at the time the United States patent is granted, has then the shortest term to run, irrespective of the fact that the foreign patent may afterwards lapse or become forfeited by the non-observance of a condition subsequent prescribed by the foreign statute.
>
> "In the view that Section 4887 is to be read as if it said that the United States patent is to be so limited as to expire at the same time with the expiration of the term of the foreign patent, or if there be more than one, at the same time with the expiration of the term of the one having the shortest term, the interpretation we have given to it is in harmony with the interpretation of the words 'expiration of term' in analogous cases. Oakley *v.* Schoonmaker, 15 Wend, 226; Beach *v.* Nixon, 9 N. Y. 35; Farnum *v.* Platt, 8 Pick. 339. In those cases it was held that the words 'expiration of term' do not mean expiration of term through a forfeiture by breach of a condition, but mean expiration by lapse of time."

Pohl, et al., v. Heyman, and
Same v. F. & M. Schaefer Brewing Company, 58 Fed. Rep. 568.

The Honorable Judge Townsend, in this case, reviews the authorities on this subject, quotes from Pohl, *et al. v.* Anchor Brewing Co., *supra,* the portion first above quoted, and adds:

> "THIS SEEMS TO MEAN THAT THE TERM OF THE UNITED STATES PATENT SHALL BE DEPENDENT UPON SOMETHING WHICH IS FIXED AND DEFINITE

IN THE FOREIGN PATENT AND LAWS, AND SHALL NOT BE SUBJECT TO BE TERMINATED BY THE OCCURRENCE OR NON-OCCURRENCE OF CERTAIN FACTS WHICH WOULD REQUIRE EXTRANEOUS PROOF. Bate Refrigerating Co. *v.* Hammond Co., establishes, I think, that the term of the Austro-Hungarian patent was fifteen years at the time the United States patent was granted, and I think that Pohl *v.* Brewing Co. indicates that the term of the United States patent could not be shortened by failure to pay the tax on the Austro-Hungarian patent."

Holmes Electric Protective Co. v. Metropolitan Burglar Alarm Co., 21 Fed. Rep. 458.

The Honorable Judge Wheeler, in discussing the lapse of a prior British patent on account of non-payment of taxes, and its effect upon the United States patent, states:

> "The statute merely requires that in such case the patent shall be so limited as to expire at the same time with the foreign patent. Rev. St., Sec. 4887. This seems to mean that the term of the patent here shall be as long as the remainder of the term for which the patent was granted there, without reference to incidents occurring after the grant. Henry *v.* Providence Tool Co., 3. Ban. & A., 501; Reissner *v.* Sharp, 16 Blatchf., 383. It refers to fixing the term, not to keeping the foreign patent in force."

This decision was quoted with approval by Mr. Justice Blatchford, in Pohl *v.* Brewing Co., *supra.*

Consolidated Roller Mill Co. v. Walker, 43 Fed. Rep., 575.

The Honorable Judge Acheson, in discussing the term of expiration of an Austrian patent, lapsing by

reason of a condition subsequent to its grant, and its effect upon the term of a subsequent United States patent, states (on p. 581), as follows:

> "It seems, therefore, to be the logical and necessary conclusion from these two decisions of the Supreme Court, that, if by the foreign law under which a patent is granted, the patentee, by virtue of the original grant, is invested with the right, at his mere option, to have the patent extended or prolonged for a fixed term, it is this latter term which limits the United States patent, under Section 4887 of the Revised Statutes. Thus is the life of the United States patent definitely fixed when it is granted, and its duration is not left in perplexing uncertainty, depending upon the future exercise of an option in a foreign country, or the observance there of conditions subsequent."

Welsbach Light Co. v. Apollo Incandescent Light Co., et al., 96 Fed. Rep. 332.

In this case, Judges Wallace and Shipman, for the Circuit Court of Appeals for the Second Circuit, speaking through the Honorable Judge Shipman, held that where a foreign patent lapses for non-payment of a tax, although it was while the application for United States Patent was pending, such lapsing of the foreign patent does not render the United States Patent void when issued, but said United States Patent will remain in force to the end of the term prescribed in the foreign patent, in this case, it being a French Patent, the term of the United States Patent was held to be 15 years.

All of these authorities, without exception, make it clear that it is the *term for which the foreign patent is granted*, or to which it is capable of being extended at the option of the patentee, or, in other words, the term of the foregn patent at the time it is issued, and

not an indefinite and uncertain duration of the patent right consequent upon the non-observance of some condition subsequent to the grant of the patent.

The Berliner-Suess Canadian Patent, No. 41,901, was granted February 11, 1893. The grant contained in the letters patent reading, in part, as follows, namely (R. p. 156):

> "Now therefore the present patent grants to the said Emile Berliner, his executors, administrators, legal representatives and assigns, for the period of **eighteen years** from the date of these presents, the exclusive right, privilege and liberty of making, constructing and using, and vending to others to be used, in the Dominion of Canada, the said invention, subject nevertheless to adjudication before any court of competent jurisdiction."

As in all Canadian letters patent granted under the same act, if only a partial fee is paid, the term of years for which this partial fee is paid is cited.

Therefore, applying the above authorities to the present case, we find that this Berliner-Suess Canadian Patent, being granted in February, 1893, for eighteen years, if it were for the same invention as claims five and thirty-five of the patent in suit, which we deny, and have pointed out, would not cause the patent in suit to expire until the expiration of eighteen years from February, 1893, namely, February, 1911, notwithstanding the fact that the renewal fees may not have been paid, and notwithstanding the fact that this Canadian Patent may have lapsed in six or twelve years by the non-payment of the second or third year partial fee.

Paillard, et al., v. Bruno, 29 Fed. Rep. 864.

This was a case in the Southern District of New

York, decided by Judge Wallace, who held that under Section 4887 the expiraton of an English Patent, by failure of the patentee to pay the stamp duty, did not cause the expiration of the U. S. Patent.

After referring to the cases of Holmes Electric Protective Co. *v.* Metropolitan Burglar Alarm Co., 21 Fed. Rep., 458, and Henry *v.* Providence Tool Co., 3 B. & A., 501, and Reissner *v.* Sharp, 16 Blatch., 383, Judge Wallace states:

> "It was held in both cases that the section in question (4887) should be construed to mean that the United States patent is to expire at the time **of the original term of a foreign patent for the same invention.**"

Judge Wallace also quotes from Mr. Justice Clifford in Henry *v.* Providence Tool Co., as follows:

> "Congress employs the words 'the foreign' patent, evidently referring to the **term** of the foreign patent to define the term of the domestic patent."

and then states that the conclusion of Mr. Justice Clifford

> "was reached upon the consideration that Congress could not have intended to grant a patent for an indefinite term, or for an uncertain and undefined duration, which would be the case if its duration could not be ascertained by referring to the foreign patent, or were to depend upon any events occurring subsequently to the issue of the foreign patent."

In this case it is seen that Judge Wallace makes the expiration of the United States Patent depend upon the expiration of the *full term* of the foreign patent, holding that unless the duration of the foreign patent can be ascertained from the foreign patent itself, the term of the United States Patent would be indefinite

and uncertain, namely, that it would be dependent upon the "occurrence or non-occurrence of certain facts which would require extraneous proof," as held by Judge Townsend in the later cases of Pohl, *et al., v.* Heyman, and Pohl, *et al., v.* The Brewing Co., 58 Fed. Rep., 568, which was decided in 1893. Judge Wallace also employs the same reasoning as did Mr. Justice Blatchford in Pohl, *et al., v.* Brewing Co., 134 U. S., 381, with regard to the meaning of the word "term" in reference to a foreign patent, when there is more than one foreign patent, that is to say, that it "indicates" that the time of expiration is to be ascertained by the term of the patent, because the use of the word "term," in reference to a foreign patent, when more than one such patent exists, indicates the *time of duration.* Judge Wallace further states:

> "Upon this construction, the duration of the term **United States Patent is fixed when the patent issues,** according to the maxim *'id certum est quod certum reddi potesti.'* Upon any other construction, neither the commissioner of patents, nor the patentee, nor the public would know the duration of the grant. **The term of a patent is the period of duration expressed in the grant."**

It is in this case that Judge Wallace refers to the fact that of two or more foreign patents the one having the foreign patent, that is to say, that it "indicates" that the time shortest term may have the longest life; that is to say, **the non-payment of the taxes or the failure to work the foreign patent having the longest term, would cause it to expire before another foreign patent having a shorter term** in connection with which these conditions were complied with.

Walker on Patents, p. 151, in referring to the termination of a United States Patent by reason of the forfeiture of a prior foreign patent, states:

> "The termination of a foreign patent, prior to its appointed end, because of an omission of the patentee to do what the foreign laws require in order to keep it in force, has no effect upon the duration of a corresponding United States Patent."

and cites Pohl *v.* Brewing Co., 134 U. S., 381; Holmes Co. *v.* Alarm Co., 21 Fed. Rep., 458, and Paillard *v.* Bruno, 29 Fed. Rep., 864.

Bate Refrigerating Co. v. Gillette, 31 Fed. Rep. 809.

This case was decided by Mr. Justice Bradley on Circuit (District of New Jersey).

In this case there was a prior British Patent granted for 14 years, which became void within three years owing to the failure of the patentee to pay the stamp duty, and it was contended on behalf of the defendant that the United States Patent, by operation of law, ceased and terminated at the same time. Mr. Justice Bradley states:

> "I do not think that this position is maintainable. The English patent was granted for a term of 14 years, subject to be defeated by the non-performance of a condition subsequent. I do not think that the American patent became subject to the same condition. **The term of the English patent fixed the term of the American patent; nothing more, nothing less.** The subsequent fate of the English patent had no effect upon the American. **The life of each after its inception proceeded independently of the life of the other.** See Protective Co. *v.* Burglar Alarm Co., 21 Fed. Rep. 458; Paillard *v.* Bruno, 29 Fed. Rep. 864."

Edison E. Co. v. Electric E. S. Co., 60 Fed. Rep. 400 (404), Judge Coxe:

> "Where a foreign patent clearly and unmistakably shows on its face a definite term of years,

it would seem, in the absence of proof to the contrary, that the term so shown must be accepted by the Court as limiting the life of a patent."

In Am. & E. Enc. of L., Vol. 22, p. 384, it is stated:

"Where the foreign patent, once granted, lapses or becomes forfeited for the non-observance of some condition subsequent, or some formality, the United States Patent, if granted, **before such lapse or forfeiture,** is not affected thereby, but continues in force for the definite term granted as if no lapse had occurred." Citing:

Pohl *v.* Anchor Brewing Co., 134 U. S. 381;
Paillard *v.* Bruno, 29 Fed. Rep. 864;
Bate Refrigerating Co. *v.* Gillett, 20 Fed. Rep. 192, and 31 Fed. Rep. 809;
Pohl *v.* Heyman, 58 Fed. Rep. 568;
Diamond Match Co. *v.* Adirondack Match Co., 65 Fed. Rep. 803;
Welsbach Light Co. *v.* Apollo Incandescent Gas Light Co., 96 Fed. Rep. 332.

Bonsack Machine Co. v. Smith, 70 Fed. Rep. 383.

The Honorable Judge Simonton, after reviewing Pohl *v.* Brewing Co., *supra,* and the authorities therein referred to, reaches the following conclusion, namely:

"What, then, is the term of these Canada patents? Evidently, from these cases quoted above, the contract in the grant of the patent between the government and the patentee is that the life of the patent shall be governed by the term originally granted to him by the foreign patent, notwithstanding any premature termination thereof by non-performance of conditions subsequent by him. THE GRANT OF THE UNITED STATES LOOKS TO AND IS GOVERNED BY THE FOREIGN PATENT, AS IT IS AT THE TIME OF THE ISSUE OF THE UNITED STATES PATENT."

And further on in this decision (p. 394) the learned Judge states that the "term of the original patent must expire by its own limitation, and **not by subsequent forfeiture.**"

Under Point Eight of defendant's brief attached to the petition for *certiorari* (page 145), under which point it is contended that the patent in suit expired February 11, 1899, with the expiration of the first period of six years of the Berliner-Suess Canadian Patent, No. 41,901, of February 11, 1893, defendant's counsel seeks, beginning on page 154, to place an interpretation upon the decision of Judge Simonton in this case, which is entirely at variance with what Judge Simonton decided, and with the facts of the case.

Defendant's counsel would lead this Court to believe that the facts in the case of the Bonsack Machine Co. *v.* Smith were practically the same as the facts in the present case, but this is not so. The facts in these two cases could not be more at variance, for in the Bonsack case the Canadian Patent was *granted for a term of five years,* and in the present case the Canadian Patent in question was granted for a term of eighteen years. In interpreting this Bonsack case it must be remembered that the Canadian Patent in question in that case was not granted under the Canadian law under which the Canadian Patent in this case was granted. Judge Simonton, on page 393, points this out, and referring to the Canadian Patent, states, "The express language of these patents fixes the term of each at five years," that being under the Act of 1872. This Act permitted the Canadian patentee to tack on to this original term of the grant of five years, for which his patent was granted, two more successive terms of five years, upon the performance of certain conditions. *But the Canadian Patent was only* GRANTED *for five years.* Judge Simonton further says, on page 394:

"By examining the Canadian patents to Bonsacks it will be seen that **the term of each patent is distinctly declared to be for five years.**"

The point decided by Judge Simonton was, that the Canadian Patent having been granted for a term of five years, *the duration of the term of the grant* was what controlled the American Patent. In the Bonsack case it was sought to construe the term of the Canadian Patent to be fifteen years, because by the payment of two subsequent fees the patentee could have secured two additional terms of five years each; and under an amendatory act in Canada, passed in 1883, it was declared that all patents previously issued should be deemed to have been granted for a term of 15 years. Judge Simonton held that the Amendatory Act could not in any wise affect the date of the expiration of an American Patent, where a Canadian Patent had been taken out under the statute of 1872, and the American Patent issued before the Amendatory Act of 1883. Judge Simonton simply held that it was the term of the Canadian Patent expressed on the Canadian Patent at the date the United States Patent issued that governed the life of the United States Patent. In other words, that when the United States Patent issued under the provisions of Section 4887, it was limited by the then existing Canadian Patent, and under the reasoning which we have seen has governed the decisions of all these cases, the term must be something certain at the date of the United States Patent. Judge Simonton held that a subsequent Amendatory Act in Canada, although it may have given other rights to the Canadian patentee, could not change the duration of time that the United States Patent would exist, because the duration of the United States Patent was determined upon the issuance of the United States Patent, namely, that the United States Patent should expire with the

term of the existing Canadian Patent, and that the Canadian Patent in that case was granted for a term of five years. Of course, we have seen, under this and other decisions, that if a patentee in Canada took advantage of the laws and extended his patent for five or ten years, so that the term was continuous, our Courts have given him the benefit of the longer period.

But what are the facts of the case at bar, and what is the term for which the Suess-Canadian Patent, No. 41,901, of February 11, 1893, was granted? It is eighteen years. The grant reads (R. p. 156):

> "Now therefore the present patent grants to the said Emile Berliner, his executors, administrators, legal representatives and assigns, for the period of **eighteen years** from the date of these presents, the exclusive right, privilege and liberty of making, constructing and using, and vending to others to be used, in the Dominion of Canada, the said invention, subject nevertheless to adjudication before any Court of competent jurisdiction."

The term, then, of the Canadian patent in question is **eighteen years.** The term of the patent was not six years, as appellants contend, and capable of being extended for two more periods of six years, as it was (five-year periods) in the Canadian patent in the Bonsack case, but it was for a period of eighteen years.

The facts in the present case are similar to the facts in the case of the Diamond Match Co. *v.* Adirondack Match Co., *supra.* We have seen that in this last case the patent was granted for fifteen years, but only the partial fee for the first period of five years was paid, and the Canadian patent ceased at the end of that first five-year period; but the Court held that *it was only the* TERM *of the patent which could be considered as limiting the United States patent,* namely, the fifteen-year term for which it was granted. And so also, in the case at

the Canadian patent was granted for eighteen
:s, and although it ceased in six years, for failure to
another fee, yet, under the ruling in this Diamond
ch Co. case, and the other authorities cited, it is per-
ly clear that the only term to which we can look to
t the United States patent is the original term of the
adian patent.

The matter at the top of page 155 of defendant's
f accompanying the petition for *certiorari* is mis-
ling, if not inaccurate. If defendant's counsel had
concealed from this Court the real facts of the
nges in the Canadian laws, controlling respectively
Bonsack case and the case at bar, and had explained
is brief the fact that under the Act of 1872 the Cana-
n patents were granted for a term of five years; that
er the Amendatory Act of 1883 they were granted
a term of fifteen years, we would not have the neces-
of explaining away this misinterpretation which
endant's counsel has sought to give to this Bonsack
e, by his failure to explain to the Court this change
ne law.

At the top of page 155 of defendant's said brief the
rtion is made that, "although the duration of the
ns was changed at the time" the Berliner-Suess
adian patent was issued, the "substance of the pro-
ons is identical in each Act," and that thereby a
ure to pay a further fee and secure a further term
ses the *expiration of the term* of the Canadian pat-

It is true that under the Act of 1872, at the end
he five-year term of the Canadian patent, upon the
ure to pay another fee, there was an "expiration of
term" of such Canadian patent. And naturally, be-
se five years was the term of the patent, as stated in
grant forming the contract between the Canadian
ernment and the patentee. But this is not so under
Act as amended, nor in the present case, because the

grant in the patent, forming the contract between the Canadian govrnment and the patentee in the present case made the term of the patent **eighteen years.** Although the Suess Canadian patent ceased at the end of six years by reason of the failure to pay another fee, yet that cessation was not the "expiration of the term" of said patent.

None of the decisions have held that the *term* of a Canadian patent expired upon the failure to pay the fee for the second or third term, when the term of said patent was for fifteen or eighteen years; but that when the term of the Canadian patent was for five years only, capable of being prolonged, the failure to pay the fee to prolong said patent caused an "expiration of the term" of five years, and, naturally, for that is the expiration of the term for which it was granted.

And the same reasoning applies to the Italian patent referred to in Westinghouse Electric Co. *v.* Citizens' Tel. Co., 106 Fed. Rep. 215 (p. 161, defendant's said brief). The Italian patent in that case *was granted for a term of three years.* It could have been prolonged for fifteen years, but the grant in the Italian patent was for a term of three years.

So also in the Electric Accumulator Co. *v.* Brush, 52 Fed Rep. 130 (p. 162 defendant's said brief). In this case the Italian patent was issued for a term of three years, and the term for which it was issued, of course, controlled the United States patent. Said Italian patent never having been prolonged, renewed or extended, the termination of the three-year grant was undoubtedly "the expiration of its term."

In Edison Co. *v.* United Co., 52 Fed. Rep. 300 (defendant's said brief, 163), the Canadian patent was maintained for a continuous term of fifteen years; there was no cessation of this patent, and the case is not applicable to the case at bar. In Edison Co. *v.* United Co., the Court held that the Swedish patent did not

limit the Canadian patent, and that the term of the Canadian patent was for fifteen years, consequently, that case does not apply to the facts in the case at bar.

And in connection with the last paragraph on page 164 of defendant's said brief, we again have the fact that the Italian, Austrian and Bavarian patents were granted for terms of one, two and three years, and these "terms" were capable of being prolonged or renewed. Then, as in the Italian case, the terms of these patents expired at the termination of the term for which they are renewed or prolonged, and the Courts have so held uniformly, and such is the ruling in the Bonsack case, namely, that, although the Canadian patent was granted for a term of five years, yet if it was renewed and became a continuous term of ten or fifteen years, the longer term would control the expiration of the American patent.

In Gramme Electric Co. *v.* Arnoux, 17 Fed. Rep., 838, referred to on page 165 of defendant's said brief, we have the same condition as regards the Canadian patent granted for five years, but capable of being extended, or the Italian Patent granted for three years and capable of being extended. In this case it was an Austrian patent which, as Mr. Justice Blatchford states, on page 839, was granted "for the duration of one year." One year was the term for which the patent was granted, although it was capable of being prolonged. It was prolonged for ten years, but each prolongation was considered under the Austrian law as extending the continuous term for ten years, and under the same ruling, as made by Judge Simonton in the Bonsack case, the United States patent expired in ten years.

But in all of these cases we have this clear and unmistakable distinction: The Canadian patent in the Bonsack case; the Italian, Austrian and Bavarian patents were granted for terms of one, three or five years.

That was the term of the foreign patent as expressed in the grant upon the date that the United States patent issued, just as Judge Simonton said in the Bonsack case, namely:

> **"The grant of the United States patent looks to and is governed by the foreign patent, as it is at the time of the issue of the United States Patent."**

Or, as Mr. Justice Blatchford said in Pohl *et al. v.* Anchor Brewing Co., *supra:*

> "There is nothing in the statute which admits of the view that the duration of the United States patent is to be limited by anything but the duration of the legal term of the foreign patent in force at the time of the issuing of the United States patent."

Or, as Judge Wallace said of Paillard *v.* Bruno, 29 Fed. Rep. 864, and which he approved:

> "It was held in both cases, that the section in question (4887) should be construed to mean that the United States patent is to expire at the time of the original term of a foreign patent for the same invention. * * *
>
> "Upon any other construction, neither the Commissioner of Patents, nor the patentee, nor the public would know the duration of the grant."

Not one of the authorities referred to in defendant's said brief supports its contention that the United States patent in suit expired with the termination of the first six-year period of the Canadian-Suess patent, or, in other words, at the time when it ceased; in fact, they support complainants' contention to the contrary, and, as before said, if in defendant's said brief, it had been clearly explained that the term of the Berliner-Suess Canadian patent, that is to say, the term for which it was granted by the Canadian government was

eighteen years, and not six years, and that in this it differed from the Canadian patent in the Bonsack case in that said latter patent was granted for a term of five years, and not fifteen years, no misapprehension could have occurred. But, on the contrary, as we have shown, defendant's said brief seeks to create the impression that the conditions under which the Canadian patent in the Bonsack case, and the Canadian patent in this case were issued, were the same. This is not the fact, as we have shown.

Defendant's counsel contends under Point Eight, of said brief, sub-division d (p. 150), that under the Canadian Patent Act, a Canadian Patent "expires" within the meaning of section 4887, at the expiration of the term for which the fee to the government has been paid, and that the patent does not lapse, and is not forfeited, but that its term expires. No decisions are cited in support of this contention, at which we do not wonder, because there are no decisions to support it. All of the decisions, as we have shown, are to the effect that under the *old* Canadian patent law of 1872, when the term for which the Canadian patent was granted was five years, said patent did "expire" at the termination of its five-year period, unless another fee was paid. But, on the other hand, under the Canadian patent law *as amended,* and under which the Berliner-Suess Canadian patent was granted, the term for which the patent is granted is eighteen years, and this term of eighteen years, as Judge Wheeler decided in the Diamond Match Co., case, was the term to which we look in determining the duration of the United States patent. Although upon the issuance of the Berliner-Suess Canadian patent the fee for the first period of six years only was paid, yet that did not affect the term for which the patent was granted, and the failure to pay fees for the second and third terms of six years, did not change the term for which the Canadian patent was granted, but

simply had the effect of terminating the Canadian patent. In other words, the Canadian patent was terminated by the non-occurrence of something required by the Canadian law subsequent to its grant for the term of eighteen years.

It is manifest that by the failure to pay this fee for the second period the Canadian patent, although granted for eighteen years, lapsed or became forfeited, in exactly the same way that an English, French or German patent lapses or forfeits when the taxes or annuities are not paid at the periods stated in the laws of these countries. For instance, Great Britain grants a patent whose life is dependent upon the payment of another fee within four years after its date and then at certain stated periods thereafter. France and Germany grant patents and require, as a condition to keep them in force, for the term for which they are granted, the payment of taxes or annuities. And so in Canada, as in these foreign countries, the first fee paid upon the filing of the application carries the patent for a certain period of years. The failure to pay a second fee on the patent in Canada, Great Britain, France or Germany, causes the patent to cease and terminate at the date when such additional payment is required. It matters not what name we may call these additional fees, they have the same effect. These foreign countries say that they will grant you a patent for fourteen, fifteen or eighteen years upon the payment of a certain fee, but that if you do not pay another fee within a stated period, the patent will lapse or forfeit at that date. Canada requires a second fee within six years; Great Britain a second fee within four years, and France and Germany a second fee within one year. The Canadian law may use the term "fee," the other countries may use the term "tax" or "annuity," but that is simply terminology. It does not affect the law which grants the patent for a certain term of years; but the failure

to pay these fees, taxes or annuities has the same effect, namely, to cause the cessation, expiration, forfeiture, or lapsing of the patent, whatever it may be called. And these foreign countries also make other conditions, namely, as to working or importation, the occurrence or non-occurrence of which causes the patent to lapse, forfeit, expire, or cease. But none of these can change the grant nor specify the term for which the patent is granted, and which term existed at the date of issue of the United States patent. They are conditions subsequent which, as Judge Townsend said in Pohl *et al. v.* Heyman, *supra,* "the occurrence or non-occurrence" of which would require extraneous proof.

Therefore, the labored attempt in defendant's said brief, under Point Eight (p. 145), in the Brief attached to the Petition and noted as Point Sixth in its Petition, to make a distinction between a lapse or a forfeiture of a patent by failure to pay taxes, or annuities, or to work the same within a certain period, and the termination of the Canadian patent by the failure to pay the second fee or tax, is without reason, not only because in each of these foreign countries the patent is granted for a certain term which is not, under the decisions affected, so far as the limitation of the United States patent, under Section 4887 is concerned, but in view of the fact that under all of the authorities we have cited, it is the definite term contained in the grant of the previous foreign patent, existing at the date of the United States patent, which limits the duration of the United States patent.

POINT SEVEN.

Under this point in the petition for the writ of *certiorari* (page 30), defendant contends that the patent in suit, as to claims five and thirty-five, is anticipated by the British Patent, No. 1644, of 1878 to Edi-

son (R. p. 472), if those claims are to be broadly construed and not limited to the special form of reproducer shown in Figs. 6 and 7 of the patent in suit. We think it is conclusively shown that these claims five and thirty-five are not to be construed as limited to the form of reproducer shown in said Figs. 6 and 7, but are for Berliner's broad and basic invention, as decided by the U. S. Circuit Court of Appeals and the Circuit Court in the present and in the litigation in the Graphophone case. This contention which the defendant sets forth in Point Seven of the petition for writ of *certiorari* is discussed under Point Ten of the defendant's brief in the Circuit Court of Appeals, a copy of which is attached to said petition, and it is another illustration of the extreme length to which the defendant goes in the endeavor to defeat the patent in suit.

Re Edison British Patent, No. 1644, of 1878.

This Edison British Patent was fully before the United States Circuit Court of Appeals and the Circuit Court in the Graphophone case, and was fully considered by Judge Hazel (R. p. 65, Fol. 195) and affirmed by the Circuit Court of Appeals (R. p. 73), and there is absolutely nothing in the said British Patent to Edison which could be construed as an anticipation of the claims in suit.

The defendant's sole excuse for contending again that this patent is an anticipation of claims five and thirty-five of the patent in suit, is that perhaps the Circuit Court of Appeals and the Circuit Court in the Graphophone case considered only a portion of this patent and not all of it, and in support of this contention urged the opinion of one Harry T. Goss in the form of an affidavit (R. p. 297) regarding this patent, as against the opinion of the Circuit Court of Appeals

and the Circuit Court in the Graphophone case. A brief consideration of Mr. Goss' affidavit will suffice.

Mr. Goss, in his affidavit (p. 297) also considers this Edison British Patent as an anticipation, which was also before the Court of Appeals and the Circuit Court, in the suit against the American Graphophone Co. for infringement of the Berliner Patent in suit.

Mr. Goss, however, notwithstanding the fact that this Edison Patent was before the Court fully, thinks the Court has overlooked something in it.

Mr. Goss says, in substance, that Fig. 34 (R. p. 486) of this British Patent shows the feature of guiding the sound box by means of the sound record itself, and says that he has prepared a model marked "Exhibit, Model, Edison British Patent." Of course, it would be very easy, at this late date, in the light of what Mr. Berliner has done, and where the wish is father to the thought, for Mr. Goss, who says he is a mechanical engineer and expert, to build a model according to his own notions of what Fig. 34 ought to represent. He says that this Fig. 34 is described on page 8 of the specification as follows (R. p. 301, fol. 903):

> "Fig. 34 is a perspective view showing a double phonet, there being a spiral line of indentations on each side of the revolving disc *d*, one phonet coming into action as the other finishes; in this case the spirals should be in opposite directions, so that the disc continuing to revolve in the same direction moves one phonet from the center outwards, and then the other phonet is connected and moved back toward the center; this may be used as a toy."

Mr. Goss says that there is no mechanical feed in this figure, and nothing for guiding or propelling the sound box save the record groove, and that it is like the claims in suit.

Mr. Goss does not seem to take into consideration that Fig. 34 is practically a diagrammatic sketch and that the description quoted of this sketch is not complete, and neither is the sketch.

Fig. 34 itself shows no mechanism for operating the record tablet, nor does it show any mechanism which would move the one phonet after it has traversed the face of one of the records so that the other phonet would become engaged as the first one becomes disengaged. The device shown in the sketch certainly would not be operative, as it is illustrated there. These numerous sketches in this British Patent, 1644 of 1878, are mostly incomplete, and the attention of the Court is directed to this patent (R. p. 472, etc.), itself, and to these numerous sketches in the drawings. Edison shows some sixty-six different sketches embodying different thoughts and ideas in connection with the talking machine, most of which are diagrammatic and incomplete. The descriptions of the same contained in the specification are very brief and incomplete. The main invention shown in Figs. 1 and 2 is most fully described; the others are but fragmentary. The record which he assumes to use in these devices is apparently the tin foil upon soft wax, in which the record is made by an indenting point. This record was very easily "ironed out" and could not possibly propel of itself a stylus point, and required positive propelling mechanism so as to prevent the stylus point in reproducing from defacing or ironing out the record.

None of the numerous sketches showing proposed forms and variations are complete or contain the propelling mechanism, rather the propelling mechanism is omitted from most all of them, though, in order to operate, it must be supplied as well as other features of construction, to make the devices operate, if they would even operate then.

In the case of the American Graphophone Com-

pany *v.* Leeds, *et al.*, 87 Fed. Rep., 874, which was a suit for alleged infringement of the Bell & Tainter Patent, No. 341,214, this Edison Patent, No. 1644, of 1878, was very much in evidence. Judge Shipman's adjudication of this patent as a reference in that case, is quite to the point here, especially as he considers Fig. 34, to which Mr. Goss has attached so much importance. Judge Shipman says, in referring to this Edison British Patent:

> "This patent contained some of the suggestions and sketches of various sorts and kinds which Mr. Edison had thought of or had made during his experiments upon a subject novel, intricate and scientific, which required manifold and delicate experiments, and in which he took a great interest. Some of his surmises and beliefs in regard to what could be or might be done were thrown into this patent. The defendants' expert, with manifest consciousness of the difficulties in the text, translates the language of the descriptions of Figs. 27, 34 and 37 to mean that Edison had in his mind gravity reproducer, or to show that such a reproducer can be inferred from the language. **These descriptions are confessedly vague, and it is confessedly difficult to know the interpretation which the writer placed upon some of the words which he uses.**"

From the foregoing it is clear that Fig. 37 is in the same category with Fig. 34, and can carry no greater weight.

This entire patent was fully before the Court in the Graphophone Case. Judge Townsend said of this Edison British patent, in deciding this case in the Circuit Court: "The defence founded on the prior Edison patent will not be discussed because said patent was before the Court in the original suit" (R. p. 327).

POINT EIGHT.

The alleged defence relied upon under this point in the petition for *certiorari*, is that the patent in suit was anticipated by the Bell & Painter Patent, No. 341,214, of May 4, 1886 (R. p. 387). This is a defence not passed upon by the Circuit Court of Appeals or the Circuit Court, and not set forth as an error in the Assignment of Errors (R. p. 534) in this cause. It was, however, before the Circuit Court of Appeals and the Circuit Court in the Graphophone Case, and Judge Hazel discussed the same at some length (R. p. 63), and for the further reasons hereinafter set forth, it is submitted that this defence should not be considered by this Court as it was not passed upon nor urged in this litigation in the Circuit Court of Appeals or the Circuit Court. Defendant's counsel admits such to be the fact on page 39 of the petition for *certiorari* herein, where he states:

> "Under familiar practice defendant, the petitioner above-named, was not free to argue again, either in the Circuit Court or in the Circuit Court of Appeals, any of the grave and important questions of law decided in the prior suit."

The point as to whether this Bell & Tainter Patent anticipated the patent in suit was carefully considered and passed upon at length by Judge Hazel in the Graphophone Case and affirmed by the Court of Appeals, so that this is one of the points which defendant's counsel admits he was not free to argue in the courts below in this litigation, and which he now urges for the first time in this Honorable Court, and asks this Honorable Court to review the decision of the Appellate Court as to a point upon which it did not pass.

This Alleged Defense not Urged in the Circuit Court of Appeals, and not Assigned as an Error in the Circuit Court.

Although the Bell & Tainter Patent was introduced by the defendant, as a part of the prior art, in opposition to the motion for preliminary injunction before Judge Townsend, it was not argued nor relied upon as an anticipation of the patent in suit as the defendant has done under Point Eight, in the petition for *certiorari* herein. Defendant's affidavits in opposition to the motion for preliminary injunction do not set up this Bell & Tainter Patent as an anticipation of the patent in suit. This alleged defence is not referred to in the opinion of Judge Townsend granting the motion for preliminary injunction (R. p. 318). This alleged defence was not assigned as an error (R. p. 534) in connection with the appeal to the U. S. Circuit Court of Appeals, and was not urged nor relied upon in the defendant's brief before the Circuit Court of Appeals, a copy of which is attached to the petition for *certiorari* herein. It is manifest that not having been urged before the Circuit Court, nor referred to in the opinion of Judge Townsend nor assigned as an error, nor urged in defendant's brief before the Court of Appeals, this defence was not considered by the Court of Appeals, the decree of which Court of Appeals is now before this Honorable Court for review. Under Point Eight, page 31 of the petition for *certiorari* herein, this alleged defence is now apparently urged for the first time.

This was one of the main defences in the Graphophone Case and was treated at great length by Judge Hazel in the Circuit Court (R. p. 65, Fol. 195) and affirmed by the Court of Appeals.

We submit, therefore, in view of the authorities, that this contention or alleged defence on the part of the defendant should not receive the consideration of

this Court. A similar question was before this Honorable Court in U. S. *v.* American Bell Telephone Co., 167 U. S., 224, in which it was stated as follows:

> "The three remaining grounds of relief asserted by the government may be considered together. Defendants contend that as the last two, although urged in the circuit court, were not presented to the court of appeals (referring for this fact to the opinion of the latter court and also a notice which was contained in the brief of counsel for the government), we are precluded from noticing them, citing as authority Bell *v.* Bruen, 42 U. S., 1 How., 169 (11:89); Alviso *v.* United States, 75 U. S., 8 Wall., 337 (19:305); First Nat. Bank *v.* Kentucky, 76 U. S., 9 Wall., 353 (19:701); Rogers *v.* Ritter, 79 U. S., 12 Wall., 317 (20:417); Klein *v.* Russel, 86 U. S., 19 Wall., 433 (22:116); Wood County Supers. *v.* Lackawanna Iron & C. Co., 93 U. S., 619 (23:989); Wilson *v.* McNamee, 102 U. S., 572 (26:234); Wood *v.* Weimar, 104 U. S., 786 (26:779); Topliff *v.* Topliff, 145 U. S., 156 (36:658); McGahan *v.* National Bank of Rondout, 156 U. S., 218 (39:403), and Carr *v.* Fife, 156 U. S., 494 (39:508)—in which cases, with more or less particularity, the proposition is announced that this court will not consider questions not presented to and passed upon by the lower court."

While, therefore, it is respectfully submitted that this defence should not be considered by this Court, and while protesting against and objecting to the same, yet as the defendant has seen fit to dwell upon this point elaborately in Point Eight of his petition for *certiorari* (page 31), the complainants feel compelled to reiterate the position taken before the courts in the Graphophone Case, and to point out wherein this Bell & Tainter Patent, No. 324,214, is not an anticipation of the patent in suit, as was decided by the Court of Appeals and the Circuit Court in the Graphophone Case.

The Defense that Claims 5 and 35 are Anticipated by the Bell & Tainter Patent.

The defendant evidently relies considerably upon this patent as an alleged anticipation of claims five and thirty-five of the patent in suit. The Bell & Tainter Patent is No. 341,214 (R. p. 387), and was issued May 4, 1886, to Chichester A. Bell and Sumner Tainter, Washington, D. C., for improvement in recording and reproducing speech and other sounds. This patent was owned by the American Graphophone Company, the complainant in the Graphophone Case, and expired May 4, 1903. It was primarily for a sound record of the vertically undulating type, formed by means of a *cutting* or *engraving* style in *wax*, or *wax-like* material, in which a smooth cut was made by the recording stylus, which *removed the material from the groove*, and produced a smooth record of that character, as contradistinguished from the indented record of Edison, which preceded it. The specification states (p. 1, line 31, etc., Record, p. 391):

> * * * "the essential new feature of which (the present invention) is the removal of material to form the record by a cutting, gouging, or graving action of the vibrating style. Heretofore the vibrating style has, as in Edison's well-known phonograph, simply indented the recording material. * * * In this new or improved form of record not only may a larger number of words or sounds be recorded in a given surface than has been practicable with the indented records heretofore in use, but the recorded vibrations are also sharper and better defined. It is found that an indenting style smooths over the crests of the larger elevations, and also rubs out some of the finer ones."

The specification also specifies numerous additional features in which the invention is stated to consist. For a clear understanding of the construction

of the apparatus described in this patent the attention of the Court is particularly requested to the drawings and specification of the patent, which is contained in (Record, p. 387-398).

Fig. 1.

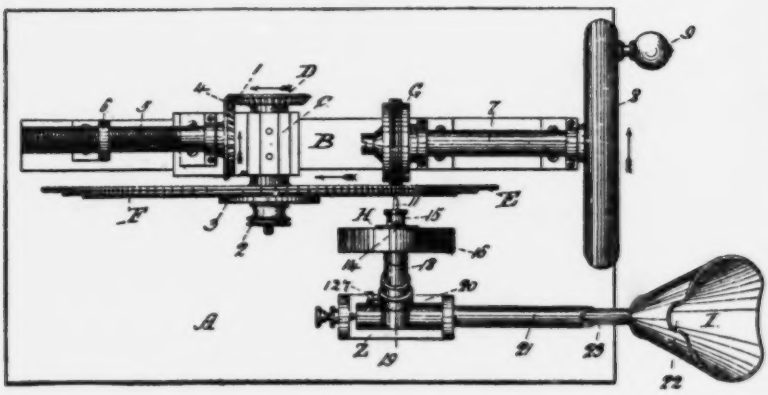
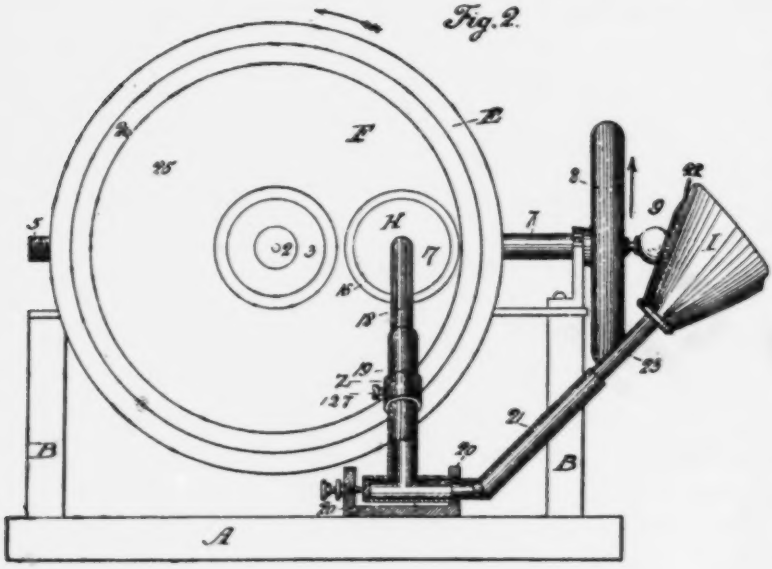


Fig. 2.



The machine described in this Bell & Tainter Patent is illustrated in the four sheets of drawings attached to the patent and particularly in Figs. 1 and 2. The patent shows, and the specification describes, a disc tablet of wax-like material, attached by a thumbscrew upon a disc or table, substantially vertically disposed upon the outer face of which wax tablet is engraved in helical form a vertically undulating sound record groove of *uneven* depth. This construction is shown particularly in Figs. 1, 2, 12, 13 and 14. A relatively fixed reproducer is shown in Figs. 1 and 2, which is mounted on the base of the machine in front of the perpendicular record, to one side of the centre on a pivoted joint, so that the stylus point will rest with yielding pressure, under the weight of the sound box, against the vertically undulating record groove. This joint allows of a back and forth movement of the sound box and stylus from and toward the face of the record, and is shown particularly in Fig. 2, the sound being carried through the hollow tubes 18 and 19, and thence through the tube 21 to the horn, or trumpet, "I." In this device, as the stylus point is not constructed to travel, or be traveled, across the face of the record tablet, means are provided for traveling the record tablet past the stylus point, which holds a relatively fixed position, as the helical groove in which the stylus point engages is rotated by the rotation given to the record tablet. These means in the construction shown in Figs. 1 and 2, comprise a horizontally disposed screw threaded rod, f, journaled on a sliding bearing, C, to which the record disc is also journaled. As the record disc, F, which is attached to the metal disc, E, is revolved through the medium of the friction wheel, "G," bearing against the rear of the metal disc, "E," carrying the wax record disc, motion is imparted to this screw-threaded shaft, 5, through the medium of beveled gears, 1 and 4. The screw-threaded shaft, 5,

intermediate in its length, passes through a fixed nut or screw-threaded bearing, 6. Consequently, as the record tablet is revolved and the screw-threaded shaft is turned, the sliding bearing in which the record is journaled is gradually traveled outward, or inward, as the case might be, thus creating a positive feed for keeping the stylus point of the reproducer in constant rubbing contact with the vertical record in the groove, as the helical groove revolves, presenting a new portion of the record groove to the stylus point constantly. In the construction shown in Figs. 12 and 13 the reproducing stylus holds a relatively fixed position, laterally considered, as in the other construction, and the revolving record tablet is traveled past the stylus point in substantially the same manner as shown in Figs. 1 and 2, though the gearing construction is of a different mcehanical mechanism, the details of which it is unnecessary to consider. It will be borne in mind that the reproducing stylus point must be in constant rubbing contact with the vertical undulations, or hills and valleys, of the record groove at all times in the construction illustrated, and that if the reproducing stylus point were absolutely rigid, without any provision to allow it to slightly yield to the right, or to the left, as the tablet was revolved, any slight irregularity in the pitch of the helix of the record groove, or in the pitch of the screw, f, of the positive feeding mechanism, for traveling the record grooves past the reproducing point, would cause the rubbing point to jump out of the record groove, or to skip over to the adjacent record groove, and perhaps to tear or mutilate the record. In a cut record groove of the vertically undulating type, such as shown in this Bell & Tainter Patent, with sloping side walls, it is essential that the stylus point must always be in intimate rubbing contact with the record in the base of the groove, and in adjusting the point to the vertical *record* in

the groove for the purpose of reproducing, if the stylus point should not strike immediately upon the centre of the *record* in the groove, which is of microscopic character, or if it should lodge upon the ridge, or field, between two grooves, it would remain on the field between the two grooves, and would not find its way to the bottom of the groove, if no provision was made to allow the stylus point to slightly yield. Nor would it slide down the sloping side walls of the record groove to the *record* proper in the base of the groove, if the stylus point was mounted perfectly rigidly. The wax-like character of the record also required that a slightly yielding adjustment should be present. Therefore, provision must be made to allow the point to follow the record proper to the base of the groove.

To provide for these difficulties, which must arise in a machine of this construction, where the record is *positively propelled by an auxiliary screw* past a relatively fixed stylus point, or *vice versa,* Bell & Tainter interposed a short section of rubber tube, 32 (shown in Fig. 8, of sheet 1), which is here reproduced. This short section of rubber tubing, 32, joined

Fig. 8.

the neck, 31, of the sound box proper to the metal tubing, 33, below it, and allowed of a slight yielding movement to the stylus point to the right, or to the left, to overcome the difficulties above noted, so that when the

stylus was placed into position in a record groove at the beginning of the record, for reproducing purposes, no great degree of care was required in doing it, and if it should happen to strike on the point between the two grooves, the stylus point would yield to the right, or to the left, slightly, as the tablet commenced to rotate, and would slide down the sloping walls to the base of the groove, or, as the patent expresses it, "*follow the record*" to the base of the groove. Or, if in operation any slight irregularity should occur in the helical form of the record groove, or any deviation exist relatively between the pitch of the helical groove and the pitch of the positive feeding screw which propelled the record, the rubber tube, 32, would slightly yield, and allow the stylus point to accommodate itself to that slight deviation, without becoming displaced from the record groove, or from defacing the record in the wax-like material, of which it was composed. This provision for a slight universal movement of this character was quite necessary to the successful operation of this machine.

The specification describing the rubber tube connection states (R. p. 394, lines 58, etc.):

> "The reproducer K when so placed is mounted upon a hollow standard composed of the tubes or tubing 31, 32, 33, and 19, and in consequence of the flexibility of the rubber tube 32 it is free to follow the record. No special care is necessary to insure its adjustment, for if the reproducer K is allowed to rest against the record with the style upon the engraved line, the style will of itself gravitate to the bottom of the groove.
>
> "There exists always a liability to disrangement in some part of the machine either in the recorder or the support therefor or the recording-tablet or its support, or if there be no disarrangement it will be difficult to insure that the reproducing-style should touch the record precisely at the proper point if the reproducer be held rigidly. Difficulties on these accounts are

> avoided by the loose or flexible mounting of the reproducer, the style automatically adjusting itself to the proper place on the record. It will be seen that the reproducer is mounted on a universal joint so that it can move in any direction. The movement parallel with the face of the tablet would, however, by itself allow the style to follow and adjust itself to the record to a useful extent."

That this required lateral movement of the stylus point to accommodate itself to these purposes was of a minute character, as far as any lateral movement was concerned, is evidenced by the fact that the specification describes another construction of reproducer which would allow of this slight lateral movement (R. p. 394, lines 117 to 123), where it refers to the construction illustrated in Fig. 10, sheet 1. It states:

> "The reproducer K' (shown in Figs. 9 and 10) has the style 26 attached to the outer of two light plates, 36 and 37, which are attached to a diaphragm, 38, of thin sheet rubber clamped at the edges between the ring 39 and the border of the back plate, 40. The tube 31 is fastened in the back plate."

We have here described a construction of rubber diaphragm which would allow the reproducing stylus, 26, to slightly yield to the right or to the left, to accommodate itself to the slight irregularities, such as referred to, and in this sense to "follow the record," or to allow it to slide down the sloping walls of the groove to the base of the groove.

It is clear from the construction illustrated in the drawings referred to, and in the description of the specification, that when the specification used the language in the portions quoted, "free to follow the record," and the words, "allow the style to follow and adjust itself to the record to a useful extent," it meant just what it says, that is, to provide against the liability to disarrangement in some parts of the machine, and further, that it could adjust itself to the *record*

proper when placed against the record tablet for reproducing purposes and find its way to the base of the nearest groove, without the exercise of special care; in other words, that the stylus point would always be in true rubbing contact with the *record,* that is, with the face of the vertically undulating portions of the groove which is the *record* proper, and which is designated in the specification as the *record,* as distinguished from the *tablet* itself upon which the record is engraved. The *record* proper is described and referred to in the specification, as the vertically undulating portions of the groove, and which contains a *record* of the sound vibrations. The *tablet* upon which the record is engraved, is referred to as the *tablet,* or the *engraved tablet.* Therefore, when the specification distinctly states that through the medium of the rubber tube section 32, the reproducer stylus is "free to follow the *record,*" or to "allow the style to follow and adjust itself to the *record* to a useful extent," it refers to the construction shown in the drawings, which has provision only to allow the stylus point to yield slightly to the right, or to the left, to keep it in rubbing contact with the *record* in the groove, and thus to follow the record, even though certain irregularities, or slight disarrangement in the parts might occur, as the helical record groove is being revolved with the disc tablet and as the record tablet is being simultaneously positively propelled laterally past the relatively fixed stylus point.

This understanding of the construction illustrated and described in the Bell & Tainter Patent is also further confirmed by the language of claims nineteen to twenty-three inclusive, which are referred to by Mr. Cameron, defendant's expert, in the Graphophone Case (a copy of the transcript of which case is submitted), in his contention that this Bell & Tainter Patent anticipates claims five and thirty-five of the Berliner Patent in suit.

The Little Joint 32 is Only Applicable to Machines which have an Auxiliary Feed Screw, where a Slight Variance May Occur Between the Pitch of the Feed Screw and the Pitch of the Record Groove.

It is understood that as this little attachment, or auxiliary rubber neck joint, 32, *located between the reproducer head and the free end of the carrying arm,* 19, can only be useful, and only have a function to perform, in a class of machines such as the graphophone, or phonograph, where the reproducer, or recorder, must have an auxiliary feed screw, or other mechanism, as a means for positively traveling the record past the reproducer, or *vice versa;* that, therefore, this auxiliary joint, or device, is *only applicable to this particular character of machine where a feed screw, or similar mechanism, must be employed for this purpose, and wherein a slight variance between the pitch of the record groove and the pitch of the feed screw might cause a perfectly rigid reproducer point to de-track, and become displaced from the grooves, especially where a groove of such extremely shallow depth and practical absence of side walls, such as complainants' groove, is used.*

The Small Auxiliary Joint 32 Could Have No Useful Purpose or Function, to Perform in Complainants' Machine.

It is equally clear, we submit, that such an intervening *auxiliary universal joint* between the reproducer head and the free end of the carrying arm, *could have no useful purpose to serve, and no function to perform, in a machine of complainants' construction, where the gramophone record groove becomes at once the feed spiral and the vibrating medium for reproducing the sound, combined in one and the same groove.*

In other words, where the feed spiral is separate

and distinct from the record groove, it may be useful to interpose between the end of the carrier arm and the reproducing head a universal joint, such as 32 of the patent, or to have a diaphragm sufficiently flexible to allow the stylus to yield laterally, especially where defendant's records are used, so that any difference between the pitch of the record groove and the pitch of the feed screw, or any slight irregularity in the record groove may be compensated for. *But where, as in complainants' machine, the propelling spiral and the record groove are combined in one and are one and the same thing, there can be no such difference between the pitch of the two, and no such irregularity or "drunkenness" of record can possibly exist.*

Material Difference in the Action of the Stylus of the Berliner and the Bell & Tainter Machines.

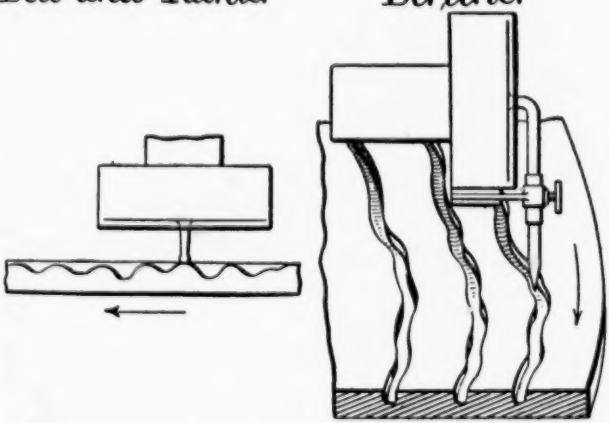
It will be borne in mind that in this Bell & Tainter construction of engraved *vertically* undulating record formed of microscopic hills and valleys, the stylus point is vibrated in the direction of its length, or up and down, as it were, and must be *held in constant rubbing contact* with the surface of the hills and valleys by the weight of the sound box, as illustrated in Figs. 1 and 2, of the Bell & Tainter Patent, No. 341,241 (Record, p. 387), or, for instance, as in the construction illustrated in the Tainter Patent, No. 341,288, particularly in Fig. 4. (See Record, p. 402.)

On the other hand, in the Berliner *laterally undulating record of even depth,* having the sound waves recorded in opposite sides of the side walls of the groove, the stylus point is vibrated laterally, instead of in the direction of its length, by the sound undulations in the side walls of the groove, operating as a *double cam,* which gives it a positive back and forth motion. This is illustrated in the following sketch, in which Fig. 1 represents the Bell & Tainter construc-

tion and operation of stylus, and Fig. 2 represents the Berliner construction and operation of stylus. The Bell & Tainter *vertically* undulating record operates as a *single cam* which forces the stylus upward, as an elevation occurs in the record groove, in its travels past the stylus point, and relies for the downward, or return motion, either upon the weight of the sound box, and the springlike tendency of the diaphragm to return to its normal position. Or, should the sound box be fixed, as illustrated in the construction shown in Figs. 18 and 19, of the Bell & Tainter Patent (Record, p. 390), it relies solely upon the spring of the diaphragm, and its tendency to return to normal. The Bell & Tainter stylus in connection with the diaphragm of the sound box, operates like a piston of a vertical engine, or like an up and down plunger. The Berliner stylus operates sidewise like a suspended tuning fork.

Fig. 1.
Bell and Tainter

Fig. 2.
Berliner



Diagrammatic views illustrating difference in the action of the stylus in the Bell and Tainter and Berliner machines.

In the Bell & Tainter construction, as well as in the Edison, the weight of the sound box is carried by the *record* in the groove, as the stylus bears directly upon the vertically undulating record groove. The weight of the sound box is also upon the centre of the diaphragm where the stylus point connects with it. The diaphragm, therefore, is normally under pressure, or tension, according to the weight of the sound box.

In the Berliner construction, the stylus is fulcrumed upon the sound box casing by a spring, or bar, attached to the sound box casing, and to the stylus bar, which spring, or bar, carries the weight of the sound box. In the Berliner construction, as the *record* proper is in the side walls of the groove, and as the stylus point may rest upon the base of the groove the weight is not carried, necessarily, upon the record proper.

Nowhere in the Bell & Tainter Patent is it intimated that the invention which Mr. Berliner made in November, 1887, and which is specified in claims five and thirty-five, was in the mind of Bell & Tainter, or existed at that time. The Bell & Tainter Patent is strong evidence of complainants' contention that it was not known at that time that it was possible to successfully reproduce sound by simultaneously propelling the stylus point over the face of the record tablet through the medium of the record groove itself while the stylus point was being simultaneously vibrated by the undulations in the record groove. The Berliner laterally undulating record groove of even depth, best adapted to this purpose, had not then been invented, and was not invented until over two years after the date of the filing of this Bell & Tainter application. Bell & Tainter filed on June 27, 1885, while Berliner's invention was not until about November, 1887. Bell & Tainter certainly would not have cumbered their application and their patent with superfluous auxiliary

mechanism for propelling the record past the stylus point, or *vice versa,* had they known at the time what Mr. Berliner, by careful experiment and investigation afterward taught the public, that the stylus point of a sound reproducing machine could be propelled by the record groove at the same time that it was being pulsated phonetically, without destroying, or impairing, the true vibrations, nor had they conceived, nor disclosed an apparatus for carrying out this method. The fact that they deemed it necessary to have this additional cumbrous mechanism for reproducing sound is strong evidence against the defendant's contention. Further, had they at that time conceived it, they certainly would have disclosed it.

Mr. Cameron's Contention.

Without reviewing in detail that portion of Mr. Cameron's deposition, defendant's expert in the Graphophone Case, which contains his argument on behalf of the contention that this rubber neck, 32, in the Bell & Tainter Patent, disclosed the Berliner invention, we will merely call the Court's attention to Mr. Cameron's deposition, p. 250 to 256 of the Graphophone transcript submitted.

We submit that his arguments are unsound, and that they consist largely in an attempt to twist and contort certain language of the Bell & Tainter Patent to mean something which the specification and the drawings clearly show it does not mean, such as the words, "Free to follow the record," the words, "universal joint," and the words "allow the style to follow and adjust itself to the record to a useful extent." What these words mean has been hereinbefore considered, and a careful examination of the specification in connection with the drawings of the patent will show that they cannot be given the interpretation which Mr.

Cameron claims for them, and that the construction illustrated and described in the Bell & Tainter Patent is radically different from the method, and apparatus, subsequently invented by Mr. Berliner, and which invention to-day had largely superseded the old form of Bell & Tainter machines and records.

Re Claims 19 to 23 of Bell & Tainter Patent.

Mr. Cameron also attempts to show that claims nineteen to twenty-three, of the Bell & Tainter Patent, called for constructions similar to the Berliner invention, but as hereinbefore pointed out, a careful reading will show that the language of these claims, which was carefully selected, referred only to the slight lateral movement of the stylus point to allow it to adjust itself to the *record* proper, which word is advisedly used in all the claims as contradistinguished from the record *tablet*.

Claim nineteen refers to the style itself, which is free to move laterally, and thereby adjust itself automatically to the sound *record*, which could be answered by the construction shown in Fig. 10, in which the style is mounted upon a rubber diaphragm, which would allow it to yield laterally sufficiently for the purpose of adjusting itself automatically to the record in the groove. The rubber neck construction would also allow of this.

Claim twenty would more properly refer to the rubber neck construction shown in Fig. 8, where the rubber neck mounting of the reproducer would allow the style a slight lateral movement to adjust itself on the *record* proper.

This is true also of claim twenty-one, as the rubber neck construction shown in Fig. 8 is also referred to as "a universal joint."

Claim twenty-two would also refer to the rubber

neck shown in Fig. 8, so that the rubbing style would be loosely mounted, and free to move laterally to adjust itself to the *groove*.

Claim twenty-three would also refer to the rubber neck construction shown in Fig. 8, which would allow the style of the reproducer, rubbing over the sound *record*, having sloping walls, to adjust itself to the base of the record groove by sliding down the *sloping side walls*.

Mr. Cameron realized that this lateral movement provided for in the Bell & Tainter Patent is of a most limited character, but his argument is, that if the reference shows the *slightest lateral movement* it meets the invention of claims five and thirty-five, disregarding the broad and widely different principles of operation and construction set forth in the two patents. Mr. Cameron says (p. 255 of the Graphophone transcript):

"However, this difference in the extent of lateral movement across the face of the record is not material. If the stylus of the Bell & Tainter Patent travel across the face of the record TO THE EXTENT OF BUT A SINGLE SPIRAL it is apparent that it would be 'free to be vibrated and to be propelled' by the record groove, since the spiral form of the groove constitutes it one that at every instant of the operation is not only vibrating the stylus but moving it to the extent of the pitch of the spiral across the face of the tablet."

We think that this statement explains the position of Mr. Cameron, and of the defendant, in which they *ignore the widely different principles of operation*, and of construction, of the two inventions, and are *simply playing with terms and with words*.

Bell & Tainter's invention was for a particular class of machine, and particular character of a vertically undulating record.

Re **American Graphophone Company** *v.* **Leeds.**

Mr. Cameron has referred in his deposition (Graphophone Transcript, pp. 261 to 263), to a decision of Judge Shipman in 87 Fed. Rep., 873, in the case of the American Graphophone Company *v.* Leeds. He states that in this case the defendant's machine was constructed in accordance with the Amet Patent, No. 562,694, of June 23, 1896 (Graphophone Transcript, p. 411). This Amet machine was constructed to reproduce sound from cylindrical wax-like records, having vertically undulating grooves of *uneven* depth, through the medium of a glass arm, or tube, pivoted at its inner end upon a crude frame, or standard, and having at its outer end a small glass nib turned down, which operated as a stylus point, rubbing over the vertical undulations in the record groove of the wax-like cylinder as it rotated on a mandrel,—the glass nib being held in contact with the record groove by a spiral spring. It had no diaphragm, or sound box, and was essentially a toy machine. Mr. Cameron says that this construction, operating as thus defined, was held in the Leeds case, by Judge Shipman, to infringe claims 19, 20, 21, 22 and 23 of the Bell & Tainter Patent, No. 341,214.

The attention of the Court is particularly called to this decision, where it will be seen that Judge Shipman in a portion of his decision, which Mr. Cameron does not quote, holds that the invention of these claims of the Bell & Tainter Patent was a dual invention. He states:

> "The material of the record and the reproducer are each necessary parts of the invention. Either part without the other would be ineffectual, but in combination both tend to make an operative and successful instrument."

Judge Shipman says that one of the essential features of this invention was the *vertically undulat-*

ing record cut or engraved in wax or wax-like material. He said, "It was found necessary that the material should be cut, or engraved, at the point of the blade, and that it should be capable of being readily removed in chips or shavings,"—and then refers to the operation in which the reproducing stylus "followed all the elevations and depressions in the groove." He further states:

> "This peculiarity of the dual invention of the material for an engraved record and the reproducer, and the fact that the latter was brought into being to make the former of practical value, is of much importance in the proper construction of the quoted claims of the patent if it should be held that the producer alone, though novel, is not patentable."

He states further:

> "The two improvements of importance with respect to claims 19 and 24, inclusive, are the new material for a sound record upon walls were engraved by a cutting style; and the reproducer which rested upon these grooves by gravity, and moving along them, 'imparted to a second diaphragm the vibrations incident to the elevations and depressions of the bottoms of the groove.'"

It is thus clear that in the Leeds case referred to (87 Fed. Rep., 873), a large portion of the decision is devoted to a consideration of a vertically undulating cut, or engraved, groove in wax, or wax-like material, which was adopted and used by the defendant on the Amet machine referred to.

In the case of the American Graphophone Company *v.* The National Gramophone Company, 92 Fed. Rep., 365, where it was sought to enjoin by preliminary injunction the Berliner machines, on the basis of the Leeds case, for infringement of claims 19, 20 and

21, Judge Shipman, who had decided the Leeds case, sitting in the Circuit Court of Appeals, for the Second Circuit, reversing a decision by Judge Lacombe, said:

> "The adjudication in the Leeds case was not an adequate basis for an order for an injunction *pendente lite* against the Berliner device, for it relates to the infringement of claim twenty-one by the use of the dual improvements of Bell & Tainter, and was not intended to go further and decide the status of a device which did not contain a tablet of their new material for a sound record. The order of the Circuit Court is reversed with costs."

Claim twenty-one, referred to by Judge Shipman, reads as follows:

> "21. The reproducer mounted on a universal joint and held against the record by yielding pressure, substantially as described."

It is fair to assume that as Judge Shipman held that this Berliner machine did not infringe this claim, under the construction given to it by the Court, that the converse is true that the Bell & Tainter construction, which is specified in claim twenty-one, did not anticipate the Berliner machine.

Conclusion re Bell & Tainter.

The attention of the Court in this connection, regarding the alleged anticipation by the Bell & Tainter Patent, is called to the deposition of Mr. Hunter, complainants' expert, given in rebuttal (Graphophone Transcript, pp. 83 to 99). In considering Mr. Cameron's deposition, Mr. Hunter states (p. 83):

> "After carefully examining Mr. Cameron's testimony, I am forced to the conclusion that his statements regarding this Bell & Tainter Patent, are misleading, and preclude a fair comparison of the Bell & Tainter Patent, and the claims in suit

> of the complainants' patent, if consideration were left to the language employed by Mr. Cameron. * * * In my opinion, therefore, he has given to the words quoted different meanings from those intended by the patent, and consequently, the basis of his opinion is unsound, as I shall endeavor to show."

The language of the Bell & Tainter Patent referred to by Mr. Hunter, which Mr. Cameron, as we contend, has misconstrued and misread, is that which has heretofore been referred to, and considered in this brief in reviewing the Bell & Tainter specification.

Mr. Hunter further states, after reviewing the points made by Mr. Cameron, in connection with the Bell & Tainter Patent (Graphophone Transcript, p. 96):

> "I do not agree with this statement (Mr. Cameron's statement quoted by Mr. Hunter), because the Bell & Tainter structure does not embody 'all of the functions and capability of action' of the machine of the complainants' patent. Furthermore, it does not have means 'whereby the reproducer style may move laterally over the face of the record,' unless such lateral motion be limited to the extent of one groove for adjustment solely to that groove, in which case that adjustment is not feeding or propelling, as called for by claims five and thirty-five of complainants' patent in suit. Furthermore, such a feeding or propelling action necessary to complainants' structure, would be inconsistent with the employment of 'means whereby the record tablet itself may travel past the reproducer stylus,' mentioned by Mr. Cameron in connection with the Bell & Tainter apparatus."

Mr. Hunter further states (Graphophone Transcript, p. 97):

> "The invention of claims five and thirty-five requires that the feeding or *propelling action shall*

take place over the entire length of the record groove of the tablet, and shall begin with the beginning of the groove and end only with the ending of the groove, and that it was not limited to any total length of groove. It must, however, be for the total length, whatever that length may be on any one tablet. With this understanding, *it is quite evident that the minute lateral capacity for adjustment of the stylus in the Bell and Tainter device, which is only intended to have a capacity of about* 1-100 *part of an inch, so as to centralize the stylus in the groove, would not enable that stylus to be fed or propelled throughout the length of the record groove, which is formed as a spiral in the record tablet,* and because of its incapacity for feeding or propelling of the stylus the additional mechanical feeding mechanism for moving the record tablet bodily across the relatively stationary reproducer are required. The Bell & Tainter Patent does not, in my opinion, disclose the invention either as to method or apparatus, called for by claims five and thirty-five of the complainants' patent in suit, nor does it disclose the method of operation or the means embodied in the propelled stylus across the record tablet, whereby it is propelled throughout the entire length of the record groove, as well as being vibrated by the groove, which is embodied in the machines of the complainants and defendant, entered as exhibits in this case."

BERLINER'S RADICAL DEPARTURE.

The positive incapacity of the sound reproducing apparatus, illustrated and described in the Bell & Tainter patent, to feed the stylus point across the entire area of the record grooves, contained on the face of the record tablet, from the start to the finish without the aid of the positive auxiliary feeding mechanism, is conclusive, we submit that the Bell & Tainter patent cannot anticipate the claims in this suit.

The conditions present in the Bell & Tainter Patent, and which had to be dealt with from the light of the talking machine art as developed at that day, are radically different from the conditions present, and shown to exist in the invention in suit of Mr. Berliner over a year and a half later. His invention created a radical departure from the methods and apparatus previously known, and adopted, in the talking machine art.

Bell & Tainter improved upon Edison, but Berliner departed from both their methods and apparatus, and struck out on radically different lines.

Bell & Tainter and Edison, from the conditions present at the date of their respective inventions (at which time they had to deal with not only the records of the vertically undulating type, but also formed in wax-like material), had quite a different proposition from that which Berliner had to deal with in November, 1887, when he developed his new method, and consequently his apparatus was constructed on radically different lines. That this is true is clearly evidenced by the Bell & Tainter Patent, and by the Edison Patents in evidence. In the Edison British Patent, No. 1644, of 1878 (Record, p. 472), the form of Edison reproducing machine shown on sheet 1 of this British Patent (p. 484 of Record), shows that he regarded the positive propelling auxiliary screw provided on the centre of the revolving disc holder, as absolutely essential, which it undoubtedly was, either in that form, or in the modified forms of positively propelling mechanism, shown in the other figures of this sheet. This was one of Edison's tin foil machines, in which the record was of the most delicately formed character, and would not allow of any other pressure of the record surface upon the stylus point than that necessary to phonetically vibrate it; otherwise, the stylus point would "iron out" the indented record formed on the

tin foil surface, or on the wax-like surface, should it be used in lieu of tin foil.

Edison, and Bell & Tainter, were clearly operating on similar lines. Bell & Tainter's radical departure from the Edison invention was essentially in *cutting,* or *engraving,* the vertically undulating lines, representing the sound record in the base of the record groove, by a gouging action in the wax-like material, which *removed the material in the form of a shaving* and left a smooth, clean-cut vertically undulating record, as contradistinguished from the Edison *indented* record, which was, more or less, indefinite, and indistinct, and over which the stylus point would frequently ride, without truly reproducing the sound recorded thereon. This was the main distinction between Bell & Tainter and Edison, and it was the main thing which made the Bell & Tainter Graphophone more successful. This, however, did not require any marked difference in the construction of the reproducing apparatus between Bell & Tainter and Edison, save only that Bell & Tainter, as hereinbefore pointed out, found that it was an advantage to so mount the stylus point that it would be susceptible of a slight lateral movement, practically within the purview of the groove, to allow it to yield, to a minimum extent, to the right, or to the left, to properly track, but Bell & Tainter's vertically undulating engraved groove in wax-like material still required, as in Edison's previous machines, positive auxiliary feeding mechanism for traveling the record tablet past the relatively fixed stylus point, or for traveling the stylus point over the entire area of the grooved surface on the wax tablet, or cylinder.

On the other hand, however, Berliner, who, as the testimony shows, had been a careful student of the talking machine art from the time of Edison's first machine, dispensed entirely with the vertically undulating grooves, either indented or cut, and dispensed

with a record formed in wax-like material, and invented the laterally undulating record of even depth in hard resisting material, which should vibrate the stylus point phonetically, back and forth, positively, by a double cam motion, as distinguished from the up and down single cam motion of Edison and Bell & Tainter, which double cam motion, as experience proves, yielded vastly superior results, and naturally.

Mr. Berliner made his laterally undulating records in *hard, indestructible material,* as distinguished from the wax-like records of Edison and of Bell & Tainter, and Berliner's assignees and licensees, these complainants and their predecessors in business, *were the first to place upon the market commercial records formed in hard, indestructible material,* which to-day are clearly vastly superior. *Up to the date of Mr. Berliner's invention, in suit, and until they were placed upon the market by his assignees and licensees, no hard, indestructible record had ever been upon the market.*

It is, therefore, evident that, from the conditions existing at the time of the Edison and Bell & Tainter inventions, they each found it necessary from the character of the record, and the material of which they were formed, to provide a construction wherein the only pressure brought to bear by the stylus point upon the record, or the record upon the stylus point, would be that which was necessary to properly acoustically vibrate the stylus point by means of the record in the groove. To travel the grooved area of the record tablet from start to finish past the relatively fixed stylus point, it was essential, in both the Edison and the Bell & Tainter devices, to provide positive auxiliary feeding means, the mechanical adjustment of which should be such that the stylus point would always be maintained centrally in rubbing contact upon the record in the groove, as the helical groove on the disc tablet, or

the spiral groove on the cylinder, rotated. To accomplish this required a very nice adjustment.

All this Mr. Berliner dispensed with by reason of the new conditions which he created, after his years of careful study of the subject, and from what he had learned in his long telephone experience. He found that the finest adjustment, to the greatest degree of nicety, was to be obtained in his method, whereby the stylus point could be traveled through the medium of the record groove itself across the face of the record, while it was simultaneously being phonetically vibrated by the undulations in the record groove, which, of course, maintained the stylus point in a positive vibrating contact with the record formed in the groove, *throughout the whole length of the spiral*, without any chance of deviation. This invention, while simple, as regarded in the light of the present day, was one of the greatest advances in the talking machine art. Mr. Berliner also found that by his method and apparatus, used in carrying it out, the pressure of the record on the stylus point for propelling purposes, in no way interfered with, or impaired, the acoustic vibrations imparted to the stylus point by the record in the groove, but that on the contrary by his new method and apparatus, materially superior results in the reproduction were achieved.

So vastly superior was the Berliner method, and apparatus, of the patent in suit, that to-day the Berliner talking machine and record of hard, indestructible material, have largely superseded the Bell & Tainter, and the Edison type of machine, and record, and are sold in all parts of the civilized world, and may be heard in the "islands of the sea." Most of these have been manufactured by the complainant, the Victor Talking Machine Company, but many of them by the defendant, in infringement of the complainants' patent in suit.

RE POINT NINE.

This point made by defendant is numbered Point Nine in its Petition, and is relative to the contention that claims five and thirty-five of the patent in suit are not valid as being claims for the function of a machine.

While this question was not argued by the defendant in the Court of Appeals, doubtless for the reason that it had been previously fully argued and decided in the American Graphophone case, the defendant had assigned it as an error in assignments 30 and 31. The defendant, however, has admitted that any of the questions decided in the American Graphophone suit were not argued in the Circuit Court or Circuit Court of Appeals. He states, on page 39 of his petition for *certiorari*, in referring to the prior decision in the American Graphophone case:

> "Under familiar practice, defendant, the petitioner above named, was not free to argue again, either in the Circuit Court or in the Circuit Court of Appeals, any of the grave and important questions of law decided in the prior suit."

The questions raised under Point Nine, as well as numerous other points in Defendant's Petition and present brief, were fully argued and decided in the American Graphophone case, and *as defendant's counsel admits they were not argued in the Circuit Court or Circuit Court of Appeals*, in these present cases, it is submitted that under the well settled decisions of this Court, *such questions as were not argued* before the Court of Appeals *should not be considered here* in the Supreme Court of the United States on appeal.

As intimated by defendant's counsel, Judge Wallace, in his dissenting opinion in the appeal on the Contempt Proceedings (Contempt Record p. 94) did in that case intimate that he thought that claim five might be considered as covering merely the function of a machine, and that it was doubtful whether it was not void

on its face; Judge Wallace, however, in that opinion, further stated that it must be assumed to be valid, saying, referring to claim five:

> "But assuming it to be valid, as must be done for present purposes,—"

Later on, he states:

> "This clearly appears by the opinion in the suit in which the validity of the patent was established. Victor Talking Machine Co. *v.* American Graphophone Co. (140 F. R. 860)."

It will be noted that Judge Wallace, on behalf of the United States Circuit Court of Appeals, in affirming the decision of the Circuit Court in this present suit, and in the suit against the Talk-O-Phone Company (a copy of which is printed on pages 41 to 46 of Defendant's Petition for *Certiorari*); said:

> "Mr. Pettit, we can shorten your labors in this case. The Court has examined the record and the briefs of counsel, and has reached a conclusion favorable to the appellee upon *all* questions, save, perhaps, one—."

As thereinafter appears, the one question referred to was that relative to the defense which rested upon the proposition that by the expiration of the Suess French Patent the Canadian Patent expired. Any doubt of the court regarding this proposition was, however, immediately relieved, as shown by the said printed remarks of the Court (Defendant's Petition, pp. 41-46) after further hearing.

It is clear, therefore, that the patentability of these claims five and thirty-five was fully affirmed and sustained by the Court of Appeals in the decision from which this appeal is taken.

We will, however, consider this alleged defense, that the claims are invalid as involving the mere function of a machine, considering each claim separately.

Claim Five Involves Clearly a Patentable Process.

In order to intelligibly discuss the question of patentable method we should consider in this connection, at the expense of some repetition, the method, and its merit.

Claim 5 reads as follows:

"The method of reproducing sounds from a record of the same which consists in vibrating a stylus and propelling the same along the record by and in accordance with the said record, substantially as described."

Mr. Berliner was the first to discover, after his long course of training in acoustics, in which science he was one of the best known in the land, that the stylus point of a sound reproducing machine which was being vibrated under the fine, sensitive impulses of the microscopic vibrations recorded in record groove, could, at the same time, be traveled across the face of the record tablet, as the helical groove rotated, by impinging the side wall of the record groove against the vibrating stylus point without impairing in the reproduction the sound to be reproduced through the medium of vibrations of the point. In other words, that the stylus point could be operated upon by the side wall of the record groove pressing against it, to travel the stylus point across the record tablet while it was being phonetically vibrated, without impairing the sound vibrations which were being simultaneously imparted to the stylus point through the medium of the sound record recorded in the groove.

Why it was that nobody ever had previously made this discovery, or devised a method for carrying it out, such as claimed in claim five, makes little difference. The fact remains that it never was done before, as far as the record in this case shows, nor was it ever de-

scribed before, nor were any means shown in the prior art by which it could be accomplished.

Mr. Berliner's article in the "Electrical World," of November 12th, 1887, discloses the fact, though in a modest way, that he had conceived and invented this method at that time. (See Record page 243, etc.) He states, at the bottom of page 256 of the "Electrical World" (Record, page 244):

> "There are various means for making audible and enlarging the vibrations of the reproducing stylus. A simple plan is to hold a sharply pointed bamboo stick, or even a toothpick, between the teeth, close both ears with small pieces of chamois leather or wadding, and press the point lightly into the rotating groove. Or a mounted diaphragm having connected to its centre a flat stylus similar in form to the recording one, but of shorter leverage—as shown lying on the table in the engraving (see Fig. 1 on page 357 of Record)—is so placed above the groove that the bent point of the flat spring also presses lightly into the groove. Or a large wooden resonant box is connected to the groove by a stick having an ivory or box wood point.
>
> "Another way is to mount the phonautogram on a circular, wooden, resonant box, which simply rotates without progressive motion, and to press an ivory point into the groove. In this case the hand which holds the ivory easily follows the groove, and the point is led along the volute of the record, and vibrates the sound box by undulatory shocks."

Mr. Berliner then, in this same article in the "Electrical World," refers to an apparatus to carry out the method. His deposition (Record, pages 239-242) shows that about the time of the filing of his application for U. S. Patent No. 564,586, which was November 7th, 1887, he made and operated a machine similar to that shown in Fig. 10 of said patent, No. 564,586, of which he produced a model marked "Complainants' Exhibit,

Berliner Model." The construction shown in this model, and in Fig. 10, of said patent, 564,586 comes within claim thirty-five of the patent in suit and is one of the means for carrying out the method claimed in claim five.

The attention of the Court is also called in this connection to Mr. Berliner's cross-examination in Record, pages 235-238 (the defendant also having called him as a witness). In answer to XQ. 36 (Record, page 238), Mr. Berliner, in referring to the construction shown in Fig. 10 of patent 564,586 and to the model produced by him, states:

> "The record groove, being in hard resisting material, presses against the stylus 29 which is firmly attached to the diaphragm-box 31 which again is connected to truck 55, and as the record groove is a spiral, in rotating the same the truck 55, is moved across the record disc. This is facilitated by the two wheels of the truck, which enable the latter to freely roll on the wire 56 when pressed by the record groove acting against the point of the stylus."

This, it may be stated, parenthetically, clearly carries Mr. Berliner's date of invention of claims five and thirty-five of the patent in suit, No. 534,543, back to at least November 7, 1887, the date of the filing of his application for patent No. 564,586, which did, however, not issue until July 28 1896.

It is true that while the commercial form of reproducing machine, principally adopted both by the complainants and defendant, has had the pivoted swinging arm, such as illustrated in Fig. 3 of the patent in suit, No. 534,543, the construction as made and operated by Mr. Berliner in November, 1887, illustrated in Fig. 10 of the Patent No. 564,586, is another practical form of the same apparatus. Other forms could also be suggested within the terms of claim thirty-five.

As to the question of the patentability of the method claim (as well as of claim thirty-five), the attention of the Court is directed to the deposition of complainants' expert, Mr. Joseph Lyons (Graphophone Record, pages 18 to 43), who was Mr. Berliner's patent solicitor in the prosecution of the application for the patent in suit in the Patent Office, and who is most familiar with the device, and who states, *inter alia*, page 36:

> "When the gramophone came into existence, and I may say that I was at its cradle, and helped it nursing, I learned at once that it was a groove that undulated laterally. The name 'gramophone' was selected to make the public understand that it was not a record of varying depth such as the graphophone record."

The creation of the method or process of operation was necessarily first conceived, and the particular means for carrying out this process or method was secondary, or the result of the preconceived method. It is quite possible to conceive the method of operation which has been outlined and which constitutes the method of claim five of complainants' patent in suit, without having in mind particular specific forms of apparatus for carrying out the method, and it is evident from the evidence in this case that there is more than one type of apparatus which may be employed in carrying out the method. As a general proposition, where a variety of different apparatus are each adapted to carry out the same mode or method in securing a primary result, it is proper to assume that the method is something more than the function of any one of the machines.

In chemical processes, and in nearly every department of science where a method is involved, it is almost always necessary to employ machines or apparatus of some kind to enable the process or method to be carried

into operation, and the said method or process is always carried out by the similar and proper operations of the apparatus. Invariably chemical processes are created before the particular apparatus is designed to enable them to be operated commercially, and there can be no material difference in this situation from that which exists in the matter of claim five of the complainants' patent in suit. This is borne out by the prior art in talking machines, because in every case prior to the date of the complainants' patent in suit, as far as I am aware, no one had conceived of the possibility of relying upon a properly formed record groove in its coaction with the stylus or point of the reproducer, as the sole means for transferring the reproducer and stylus across the record so that it is made to traverse the entire record groove of the tablet without introducing any external and mechanical feeding devices. In all cases either the record tablet was mechanically fed across the reproducing style, or the reproducer and its style was mechanically fed across the record tablet, so that as the tablet revolved the stylus was properly presented to the record groove to correspond to the shifting position of its operative portion.

The fact that it is impossible to disassociate from the apparatus the method in the particular apparatus of the patent in suit, is only what should result from the creation of the invention, and means for carrying it into effect. The machine was designed for that purpose, and it is proper that it should always perform it if it is to have any utility.

In all machines prior to the invention of this method and apparatus by Mr. Berliner, there was always mechanical mechanism for positively feeding the stylus over the record tablet, or for feeding the record tablet transversely across the stylus, and it is quite evident that if Mr. Berliner had not invented the meth-

od and means for securing the same results without having recourse to these mechanical feeding means which were a necessity to the machines of Edison and Bell & Tainter, forming the prior art, he would have embodied in the patent in suit mechanical feeding means for locating the stylus in a progressive manner across the revolving record tablet, just as all these prior inventors have done. Mr. Berliner, however, had conceived a method of operation which would dispense with this mechanical feeding mechanism, and invented a form of record tablet, which would enable him to put his method of operation into effect, and produce articulate sounds more satisfactorily and by simpler mechanism than had heretofore been thought possible. He, therefore, made a great advance in the invention of talking machines, and this advance had as its foundation the methods specified in the fifth claim of the complainants' patent in suit. The method specified in the fifth claim of complainants' patent in suit is a proper method claim which involved the exercise of the inventive faculties in its creation, and preceded the invention of the mechanism for carrying it into practical operation and was not the mere function of the machine.

Whether it is essential, or not, in order to determine the question of patentability of a method, that it was invented *before* the apparatus by which it may be carried out, it appears to be clear from a reading of the article in the "Electrical World," of November 12th, 1887, entitled "Berliner's Gramophone," that Mr. Berliner conceived the method of claim five *before he constructed the device for carrying it out*, one form of which is illustrated in Fig. 10 of Berliner Patent 564,586, the application for which was filed November 7th, 1887.

We, therefore, respectfully submit that when a clear understanding is had of the character of Mr. Berliner's method claimed in claim five, and of the

knowledge of acoustics which his invention required, and the problems which had to be dealt with in producing the invention, that it is clear that it does involve, without question, a patentable method, under the well settled authorities.

The fact that it had not been disclosed in the prior art, and that it subsequently in recent years has almost superseded the old style of talking machines with positive auxiliary mechanism for feeding the record tablet past the reproducer point, or *vice versa*, such as shown in the Edison prior patents, and the Bell & Tainter patent is strong corroborative evidence of the fact that *it did require invention to produce the method claimed.*

In support of this position we cite a few authorities:

Authorities re Patentability of Method.

Claim five reads as follows:—

> "5. The method of reproducing sounds from a record of the same which consists in vibrating a stylus and propelling the same along the record by and in accordance with the said record, substantially as described."

We have here the mode or method of producing something, the producing, or rather the *reproducing* of sound. This is entirely distinct from the apparatus which may be used for the purposes of carrying out this method, or mode, of reproducing sound, which apparatus may be constructed in several different ways.

The method consists in phonetically vibrating the stylus by the record undulations, and at the same time, by the same means, advancing, or propelling, the phonetically vibrating stylus across the record tablet throughout the entire length of the sound record to be reproduced.

The term "method" here is not used subjectively,

or passively, as applied to the machinery operated on, but *actively*, as a method, or mode, of producing, or rather reproducing, something, to wit, sound.

As hereinbefore pointed out, it remained for Mr. Berliner to discover, in November, 1887, that a phonetically vibrating stylus, vibrated by and in accordance with a sound record could be simultaneously advanced, or propelled, throughout the entire record, by using the side walls of a helical groove as the propelling means simultaneously with the communication of the phonetic vibrations, without destroying, or impairing, the phonetic vibrations of the stylus point, and consequently without interfering with the true reproduction of the sound recorded upon the record.

This new method was the result of this discovery.

The method, or art, of carrying out an invention, or discovery does not necessarily involve any particular means for employing, or using, that method.

Re the Telephone Cases.

Perhaps the most pertinent and applicable cases upon the subject are the Telephone cases (126 U. S., 1). Those cases, like the present case, involved the transmission of sound. The claim in controversy in that case was the fifth claim of the Bell patent, which read as follows:

> "5. The method of, and apparatus for, transmitting vocal or other sounds telegraphically, as herein described, by causing electrical undulations, similar in form to the vibrations of the air accompanying the said vocal or other sounds, substantially as set forth."

In other words, this claim was for transmitting sound telegraphically *by causing electrical undulations*, which undulations were similar in form to the vibration of the air accompanying the sound. Electrical undula-

tions were caused, or produced, by the voice, or otherwise, and transmitted telegraphically on a wire to a distance. Mr. Berliner reproduced recorded sound by causing the phonetically vibrating stylus, vibrated by the record groove, to travel through the entire length of the record groove solely by the impingement of the side walls of the record groove, without destroying, or impairing, the vibrations of the stylus representing the sound waves, and thereby securing the best results by automaticaly maintaining *the stylus point in absolutely proper co-relation with the record in the record groove, as it traveled throughout the entire length of the record groove,* or as the entire length of the record groove traveled past the stylus point.

The fact that Bell employed electricity in the Tele phone case, for causing the sound undulations, in no manner affects the applicability of the decision in that case to the facts of this case, as electricity for transmitting messages was old, the novelty consisting in Mr. Bell's method of using, or training, the electricity to his purposes.

Mr. Chief Justice Waite, in delivering the opinion in this case, commented upon the case of O'Reilly *v.* Morse, 56 U. S., 15 How., 62, said:

> "In the present case the claim is not for the use of a current of electricity in its natural state as it comes from the battery, but for putting a continuous current in a closed circuit into a certain specified condition suited to the transmission of vocal and other sounds, and using it in that condition for that purpose. We see nothing in Morse's case to defeat Bell's claim; on the contrary, it is in all respects sustained by that authority. It may be that electricity cannot be used at all for the transmission of speech except in the way Bell has discovered, and that, therefore, practically his patent gives him its exclusive use for that pur-

pose, but that does not make his claim one for the use of electricity distinct from the particular process with which it is connected in his patent."

See also American Bell Telephone Company *v.* Dolbear, 15 Fed. Rep. 448.

We do not dispute the proposition that a valid patent cannot be obtained for a process which involves nothing more than the mere operation or function of a piece of mechanism. Any number of cases can be cited by the defendant to this effect.

As said by Mr. Justice Greer, in the case of Corning *v.* Burden, 56 U. S., 15 How. 250:

"It is when the term 'process' is used to represent the means or method of producing a result that it is patentable, and it will include all methods or means which are not affected by mechanism or mechanical combinations. But the term 'process' is often used in a more vague sense, in which it cannot be the subject of a patent. Thus we say that a board is undergoing the process of being planed, grain of being ground, iron of being hammered or rolled. Here the term is used subjectively or passively as applied to the machinery operated on, and not the method or mode of producing that operation, which is by mechanical means, and the use of a machine ,as distinguished from a process. In this use of the term it represents the function of a machine, or the effect produced by it on the materials subjected to the action of the machine. But it is well settled that a man cannot have a patent for the function or abstract effect of a machine, but only for the machine which produces it."

This, we think, clearly distinguishes the difference between a patentable method, which actively produces something, and the mere function of a machine, as such.

This present question in this case involves, not so much the citation of authorities as to what is a patentable process as it does the application of the well-de-

fined decisions of the Supreme Court of the United States, and of the United States Circuit Court of Appeals for the different Circuits, to the method before us.

It is, of course, not essential to the patentability of a process that the process should effect a *chemical* change in substances operated upon.

Melvin *v.* Potter, 91 Fed. Rep., 151.

No test which can be definitely applied to all cases to determine whether or not a process of manufacture is patentable, as such has been authoritatively established.

Melvin *v.* Potter, *supra.*

In all cases where a Supreme Court of the United States, and the United States Circuit Court of Appeals, have denied the patentability of a process, as such, the invention claimed was, when analyzed, seen to be something which is subjectively, or passively, operated upon by the function of a machine, or by manual manipulation. Such a case is the celebrated case of Corning *v.* Burden, 56 U. S., 15 How., 252; also the effort to claim a principle is not patentable such as the principle and use of an element for a particular purpose, such as Morse's claim for the electric telegraph in O'Reilly *v.* Morse, 56 U. S., 15 How., 62.

In an improvement in a sewing machine by which the soles and uppers of boots and shoes could be sewed together by a particular kind of stitches, without any welt, the method was held not to be patentable.

McKay *v.* Jackson, 12 Fed. Rep., 615.

Again, a process for stiffening the heels of boots and shoes was not patentable.

Hatch *v.* Moffit, 15 Fed. Rep., 253.

So, also, the process of centering a pulley and

grinding the ends of the arms, concentrically with the axis, and boring the center, and securing the rim to the spider, and grinding the face of the rim concentric with the axis of the pulley, and then grinding, or centering the edges of the rim, was held not to be a patentable process, in an exhaustive opinion by Mr. Justice Brown, Risdon Iron & Locomotive Works *v.* Medart, 158 U. S., 65.

The attention of the Court is called to this last mentioned case, in which the authorities are reviewed. The process in Locomotive Works *v.* Medart was unquestionably, under the authorities, not a patentable process and is clearly differentiated from the method of claim five, of the patent in suit.

We would call the attention of the Court to a number of the leading authorities, where the processes claimed were held to be patentable.

In the case of Tilghman *v.* Proctor, 102 U. S., 708, the claim was for the manufacturing of fat acids, and glycerine, from fatty bodies, by the action of water at a high temperature and pressure.

In Mowry *v.* Whitney, 81 U. S., 14 Wall. 620, the patent was sustained for an improved process for manufacturing cast iron railway wheels, by retarding their cooling by a second application of heat, until all the parts of the wheel were raised to the same temperature, and permitting a gradual cooling.

In Cochran *v.* Deener, 94 U. S., 780, the process consisted in manufacturing flour by passing the ground meal through a series of bolting reels clothed with cloth of progressively finer meshes, and, at the same time, subjecting the meal to blasts, or currents, of air. This separated the finer flour from the impurities, so that the finer flour could be reground and rebolted.

In this latter case Mr. Justice Bradley defined the process as:

"A process is a mode of treatment of certain materials to produce a given result. It is an act, or series of acts, performed upon the subject matter to be transformed and reduced to a different state or thing. * * * The machinery pointed out as suitable to perform the process may or may not be new or patentable; whilst the process itself may be altogether new, and produce an entirely new result. The process requires that certain things should be done with certain substances, and in a certain order; but the tools to be used in doing this may be of secondary consequence."

In the case of Melvin *v.* Potter, 91 Fed. Rep., 151, the process claimed was that of manufacturing linoleum floor cloth, which consists in forming a granulated linoleum composition into sheets of spongy texture, then cutting the sheets into shapes, arranging the shapes on a flexible back, and pressing them into the foundation.

Judge Dallas in deciding this case said, *inter alia:*

"The question is not whether the mode of operation described and claimed by Melvin is chemical or is mechanical, but whether it is in fact a process, or is merely an aggregation of mechanical functions. I find no warrant in the authorities for the assumption that, unless a chemical change be effected by a process, no patentable invention or discovery can be involved in it. It is true that in both Corning *v.* Burden and Locomotive Works *v.* Medart processes involving chemical reaction were contrasted with methods which comprise nothing but successive mechanical steps to produce a merely mechanical change in the substances operated upon. In doing this, however, the Courts were illustrating, not defining, the difference between a patentable and a unpatentable process."

In the case of American Fibre Chamois Co. *v.* Buckskin Fibre Co., 72 Fed. Rep., 508, Judge Taft sustained the patentability of the process of rendering wood fibre paper soft and pliable, by moistening it with

a thin water solution of gelatine, and then crumbling and pounding it, and finally drying and smoothing it; holding that it was not a mere mechanical process, or aggregation of functions within the doctrine of Locomotive Works *v.* Medart, *supra;* or within Cochran *v.* Deener, *supra.*

In case of Hake *v.* Brown, 37 Fed. Rep., 783, the patent was sustained for the process of making beveled edge cards in an opinion by Judge Wheeler (Southern District of New York). The method consisted in ornamenting the edges by piling them obliquely, first so that the slope of the pack will correspond with the desired bevel, compressing them, to hold them in that position, beveling, ornamenting and finishing the whole pack on the sloping edge, which will bevel, ornament and finish the edge of each separate card by each operation, and of successively treating the other sides, and ends of the pack in the same manner, by which means the whole pack was treated as readily as one card.

The first claim was for this *method* of treating cards, and the second for a *card* so treated.

Judge Wheeler, in deciding the case, said, *inter alia:*

> "According to the evidence, bevel-edged cards were not new at the date of the orator's invention; neither was beveling in packs new; but arranging cards in oblique packs, and treating one side or end till all the cards were complete on that side or end, as if they were one card, and treating the other side and ends successively in the same manner, does not appear by the requisite measure of proof to have been known before. By this process the packs can be grooved or embossed and ornamented in a manner to present beveled designs upon the edges of such cards which could not be produced by treating cards separately, and the making of bevel-edged cards of any design is greatly facilitated. This method seems to be ingenious and useful. Such an

arrangement of mechanical operations, that produces a new and useful result, or an old result in an easier or better manner, is understood to be patentable. Cochrane *v.* Deener, 94 U. S., 789; Telephone cases, 126 U. S. 1, 8 Sup. Ct. Rep., 778. The first claim of the patent, therefore, appears to be good and valid for the method described.

"There is nothing new about the bevel-edged cards produced by this process, except that they are made in this way. They do not differ from those made in any other way, unless they do in design. The process does not inhere to the product, so that it differs from any like product made in any other way, as was the case with Cumming's invention of rubber plates and teeth, in Smith *v.* Vulcanite Co., 93 U. S., 486; or the driven well, in Eames *v.* Andrews, 122 U. S., 40, 7 Sup. Ct. Rep. 1073. The product itself here is old in the sense of the patent law, and there can be no patent for it, although produced in this new way. McCloskey *v.* DuBois, 8 Fed. Rep., 710, 9 Fed. Rep., 38; McCloskey *v.* Hamill, 15 Fed. Rep., 750. The second claim of this patent, therefore, appears to be invalid."

In the case of Kirchberger *v.* American Acetylene Burner Co., 124 Fed. Rep., 764 (Northern District of New York), the Court held that the Dolan process of burning acetylene gas was patentable, which consisted in surrounding a jet of gas with an envelope of air at the discharge orifice of the burner, for the purpose of preventing its combustion in immediate contact with the burner, and until it had been projected some distance therefrom, and also for a burner tip adapted to carry out such process.

The Court held, in an opinion by Judge Ray, *inter alia*, that:

"An art or operation or process is an act or series of acts performed by some physical agent upon some physical object, and producing on such object some change either of character or of condi-

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tion. It is said to be so far abstract that it is capable of contemplation by the mind apart from any one of the specific instruments by which it is performed. It is so far concrete that it consists in the application of physical force through physical agents to physical objects, and can thus become apparent to the senses only in connection with some tangible instrument and object. I Rob. on Patents, Sec. 159."

The Court held that *the process did not consist in the operation of the machine, or of the burner, and therefore it was not the function of the burner.*

The Court further stated:

"The application of a known force to known objects in a new manner is a new art. Foote *v.* Silsby, 1 Blatchf., 445, Fed. Cas. No. 4916; Higgs *v.* Goodwin, E. B. & E., 529. An art may be either a force applied, a mode of application, or the specific treatment of a specific object, and the art must produce physical effects; but it is, of course, distinct from the instrument which it employs, but any available instrument may be employed."

In the case of Chisolm, *et al. v.* Johnson, 106 Fed. Rep., 191, the following process was held to be patentable, as such, and that it was not the mere function, or result, of a machine:

"The improvement in the art of hulling green peas, which consists in carrying the filled pods to an elevated position, and impacting the filled pods while falling, so as to sever the connections of the two half shells of the pod and [of] the peas with the pods at one operation:

"The process of gathering and hulling green peas, consisting in removing the vines from the ground with the green peas attached subjecting the vines and attached peas while green to impact, of the character described and separating the hulled green peas from the refuse."

So also Chisholm *v.* Randolph Canning Co., and Chisholm, *et al. v.* Canastota Canning Co., 135 Fed. Rep., 815-816.

In Eames *v.* Andrews, 122 U. S., 40, the Supreme Court of the United States sustained the Green driven well patent which covered a process which consisted in the driving of a tube tightly into the earth, without removing the earth upwards, to serve as a well pit, and attaching thereto a pump, thereby putting into practical use the new principle of forcing the water in the water bearing strata of the earth into a well pit, by the use of artificial power to create a vacuum.

In the case of Dayton Fan & Motor Co. *v.* Westinghouse Electric & Mfg. Co., 118 Fed. Rep., 562, it was held that a patent for a process is not invalidated by reason of the fact that such process was disclosed in the prior patent for an apparatus, where there has been no dedication of the invention to the public.

It is respectfully submitted that citation of further authorities is unnecessary, and that the method claimed in claim five, of the patent in suit, under the authorities cited, is clearly a patentable method.

Claim thirty-five clearly covers a patentable apparatus comprising mechanical elements essentially necessary to make up the complete patented mechanical combination.

It is difficult to conceive how the defendant can consistently argue that this claim is for a function of a machine; any extended argument to the contrary seems a work of supererogation.

The claim reads as follows:

> "35. In a sound reproducing apparatus consisting of a traveling tablet having a sound record formed thereon and a reproducing stylus shaped

for engagement with said record, and free to be vibrated and propelled by the same, substantially as described."

While the word "In" at the beginning of the claim might have been omitted, as the words "consisting of" are also used in lines 1 and 2; or the words "consisting of" might have been omitted, yet the claim is perfectly clear and intelligible, as hereinafter more particularly noted.

This claim, which has been so often passed upon by the Courts, and held valid, is for

"A sound reproducing apparatus."

The claim then recites the mechanical elements clearly, and concisely, going to make up and form the essential mechanical features of this reproducing apparatus, viz.:

(a) A traveling tablet having a sound record formed thereon;

(b) A reproducing stylus, which reproducing stylus is shaped for engagement with the said record.

It is also required that the construction shall be such that this said reproducing stylus shall be *so mounted* in the reproducing apparatus that it will be free to be vibrated and propelled by the record.

It is difficult to conceive how a mechanical combination comprising more than one mechanical element could be more fully, clearly, concisely and intelligibly claimed.

To say that this claim is for nothing more than the function of a machine is, it is respectfully submitted, without any foundation whatsoever, and merely introduced, as numerous other of the defences, for the purpose of discussion, without any hope or expectation of the defence being seriously considered.

RE POINT TEN.

This point made by defendant is numbered 10 in its petition, and is, in substance, that claim thirty-five is indefinite, meaningless and claiming nothing, and is void.

The substance of this point has been briefly referred to under the consideration of Point Nine. It is in substance, merely that the word "In" at the beginning of the claim thirty-five, is superfluous, and should have been left out. It is probably true that the word "In" was placed in the beginning of the claim through an oversight, in view of the fact that the claim contains also in lines 1 and 2, the words, "consisting of." If either the word "In," or the words, "consisting of," had been omitted, the claim would still mean exactly the same thing as it does as it stands, and it is respectfully submitted that there can be no substantial dispute as to what this claim covers. This is fully pointed out in the preceding page.

It is respectfully submitted that the claim as it stands is clear, concise and thoroughly intelligible, specifying particularly and minutely the elements going to make up the reproducing apparatus claimed, and it is believed that this Honorable Court will coincide with the decisions of the lower Courts heretofore given regarding this question.

POINT ELEVEN.

Defendant contends under Point Eleven in the petition for *Certiorari,* that the defendants' machines do not infringe claims five and thirty-five of the patent in suit, if they are to be construed as limited with reference to the Suess-Canadian Patent. Just what this means is rather difficult to appreciate.

There is nothing tangible shown as to how, or why, these claims should be so restricted, and no plausible foundation laid for such a construction.

This question has been heretofore fully considered.

The defendant does not deny that its machines and records are made in accordance with the construction, and method of operation, of claims five and thirty-five, as construed by the Court in the Graphophone Suit.

The affidavit of H. C. Kennedy (R., p. 54, fol. 180, etc.), shows that the defendant's machines and records are identically the same except as to some ornamentation, as complainants' commercial machines and records, and as the defendants' machines and records in the Graphophone Case.

The attention of this Honorable Court is called to the erroneous statement by defendant's counsel under Point Eleven in the petition for *certiorari*. Defendant's counsel states that Berliner asserted *under oath* in connection with the Suess Canadian Patent, that the invention of claims five and thirty-five of the patent in suit was broadly the invention of Suess. This is a glaring mis-statement, as there was no oath filed by Berliner in connection with the Canadian Patent. This Canadian Patent is printed in the record, pages 155 to 175, and nowhere does there appear an affidavit by Berliner in connection therewith and in fact, the practice of the Canadian Patent Office does not provide for such an oath to be filed by an assignee.

POINT TWELVE.

Under this point in the petition for *certiorari*, defendant's counsel relies upon the case of Harriman *v.* Northern Securities Co., 197 U. S. 284, to support his contention that this Court should consider this case on its merits, and dismiss the bill of complaint if any one or more of the defences relied upon is a valid defence. While this Court has approved of such a doctrine under certain circumstances, yet it is respectfully submitted

that it does not apply to the present case. This Court stated in Mast F. & Co. *v.* Stover Mfg. Co., 177 U. S. 495, that as to whether this doctrine applied in a case where a temporary injunction was granted *pendente lite* upon affidavits and immediately upon the filing of a bill:

> "must be determined from the circumstances of the particular case."

In this case, this Honorable Court pointed out various circumstances, among others, which might arise, which would make this doctrine inapplicable for instance, it was stated:

> "If the showing made by the plaintiff be incomplete; if the order for injunction be reversed, because the injunction was not the proper remedy, or because under the particular circumstances of a case, it should not have been granted; or if other relief be possible, notwithstanding the injunction be refused, then, clearly, the case should be remanded for a full hearing upon pleadings and proofs * * *. Ordinarily, if the case involve a question of fact, as of anticipation or infringement, we think the parties are entitled to put in their evidence in the manner prescribed by the rules of this Court for taking testimony in equity causes."

It is submitted that the circumstances of this case are such that this doctrine which defendant's counsel seeks to apply under Point Twelve in the petition for *certiorari* is not applicable.

Defendant's Proofs of Foreign Patents Incomplete.

For instance, objection has been made that the French and German patents upon which defendant relies to curtail the term of the patent in suit are not proven. This objection is stated on page 122 of this brief, and manifestly if this Court should decide that defendant's contention based upon these French and German patents should be a valid one, there would not be sufficient evidence in this case and in

this record upon which to dismiss the bill of complaint. In other words, the defendant's record does not present the whole case to this Court, for in this particular instance, as an illustration, the complainants' contention that these French and German patents are not proven, is well founded. Complainants' objection to these patents in this regard is that the foreign patent itself is not exhibited in the record. All that appears to be in the record are alleged certified copies of the specifications and drawings, and such was held in Rassau *v.* Brown, 21 Appeal Cases, District of Columbia, p. 73, not to be sufficient to put the patent in evidence, so that in this instance, among others, this case presents circumstances and facts which can only be satisfactorily decided upon full pleadings and proofs at final hearing.

Another reason why this doctrine does not seem applicable to this case is that by reason of the familiar practice in the matter of motions for preliminary injunctions in the U. S. Circuit Court for the Southern District of New York, affidavits in rebuttal by the complainants to defendant's affidavit opposing the motion for preliminary injunction were not permitted. Under this familiar practice in motions for preliminary injunction, there is no evidence in reply to the defendant's affidavits in opposition to the motion, and manifestly the complainants should be entitled to proceed with the taking of proofs in the usual way, and this case should be remanded to the lower Court for procedure in the usual manner prescribed by the rules.

POINTS THIRTEEN AND FOURTEEN.

Under Point Thirteen, defendant's counsel has inserted in the petition for the writ of *certiorari* what purports to be the oral decision of the Circuit Court of Appeals in this cause, affirming the decree of the Circuit

Court, and under Point Fourteen, states that the question of the expiration of the Berliner-Suess Canadian Patent by reason of the lapsing of the Suess French Patent is **not available in this petition** to this Honorable Court. This alleged defence is not, therefore, brought here upon the writ of *certiorari,* so that further reference thereto is unnecessary, although we submit, as in the Circuit Court of Appeals, that there is nothing in this defence, and this was pointed out conclusively under Point Nine in complainant's brief before the Circuit Court of Appeals, page 164, a copy of which accompanies the complainant's brief in opposition to the petition for the writ of *certiorari.*

The foregoing discusses all the points referred to in defendant's petition for the writ of *certiorari,* but in the courts below, the defendant put forward a large number of other reasons and contentions and argued the same at some length, and presuming, that as they were so elaborately set forth in the Court below, an attempt will be made to repeat the same in this Honorable Court, although not set out in the petition, it is deemed advisable to refer to these alleged defences, and to show wherein they are not valid.

Defendant Contends that the Patent in Suit was not Fairly in Controversy in the Graphophone Case.

The defendant's contention is that the complainants and the American Graphophone Company, by a certain contract of December 8, 1903 (R., p. 224), agreed that the American Graphophone Company should have a license under certain patents, among others the patent in suit, in the event that the suit should be decided favorably to the complainants, and that the American Graphophone Company should pay a certain royalty. The defendant contends that, there-

fore, the suit on Patent No. 534,543 was not fairly in controversy.

This question was fully argued before the Court of Appeals, and the Circuit Court, in the Graphophone Case, and definitely, and finally decided. Judge Hazel held, affirmed on Appeal by this Court, that:

"A prior agreement, by which the interested parties mutually agreed upon terms of settlement on condition that the patent in controversy is sustained by the Court, cannot, upon principle and authority, deprive a Court of its inherent power and jurisdiction," citing a number of authorities (R., p. 65, Fol. 193), viz.:

McMillin *v.* St. Louis & Miss. Valley Transp. Co., 18 Fed., 260;
Guaranty Co. *v.* Green Cove Rd. Co., 129 U. S., 137;
Doyle *v.* Continental Ins. Co., 94 U. S. 535;
Insurance Co. *v.* Morse, 20 Wall. 445.

This agreement was, therefore, fully before the Court in the Graphophone Case, and all questions regarding it. This decision is comprehensive enough to cover all questions which might arise regarding the effect of this agreement upon the relation of the parties, and no other questions relative to this subject can here arise which the decision in the Graphophone Case did not consider.

This defence was vigorously urged in the Circuit Court upon the motions for preliminary injunction herein, and was considered and decided by Judge Townsend in the opinion granting the motion for preliminary injunction in the following language (R. p. 327, Fol. 979):

> "The contention that by reason of a certain contract between the parties 'the prior suit was not * * * a suit in which the Berliner Patent in suit * * * was fairly in controversy' is not

deserving of notice. The contract and the relations of the parties were fully before the Court, and the record and briefs in said case are a sufficient answer to any such contention."

It is respectfully submitted that in this agreement of December 8, 1903 (R., p. 224), to which the attention of this Honorable Court is called, that there is absolutely nothing which could savor of collusion, or unfairness. One of the main objects of the agreement was to bring the cause to an early hearing upon its merits, and to avoid long delays so frequently occurring through the medium of technical pleadings, and other means, tending to delay a meritorious cause in coming squarely and fairly expeditiously before the courts upon its merits. (See Clause 1 of the Agreement, R., p. 225.) Each of the parties owned certain U. S. patents, and, among other things, the agreement provided that if any of the Victor Company's patents should be sustained relating to talking machine, or records, the American Graphophone Co. should pay a royalty upon a certain basis, and, on the other hand, it provided that if a certain Jones patent, owned by the American Graphophone Co., should be sustained as to records, that a certain royalty should be paid by the Victor Co., both under certain conditions. (See R., p. 226, clauses 2 and 5 of the agreement.)

It is respectfully submitted, that not only is there nothing in this agreement which savors of unfairness, or irregularity, but further that the record in the Graphophone case, a copy of which is submitted to this Court, clearly shows the full and complete defense which was urged by the defendant in that case. The records of the Court show that the case was fought with great pertinacity, and, in fact, with considerably more acrimony than in ordinary patent suits. The decisions of Judge Townsend, and of the Court of Appeals in this present suit, show that the alleged new defenses in this

case were unsubstantial and without foundation, which emphasizes the fact that defendant's counsel in the Graphophone case in failing to put in such unsubstantial and unfounded defenses, could not be charged with any *laches*, or neglect, in omitting the same, as it may have been manifest to him, as was decided by the Courts in this case, that these defenses would not constitute a substantial defense. However this may have been, the defense in the Graphophone case was full and complete, as defendant's counsel in that case believed it to be, and there was no one better skilled in the talking machine art, from the legal side of the situation, than defendant's counsel in that case.

Defendant's counsel in the suit of these complainants against Hoschke (158 F. R., 309), also urged this alleged defense, but Judge Hough, in deciding the case, entirely ignored any such contention.

We, therefore, submit that there is no force in this contention.

Defendant's Contention That the Sale of Records is not Infringement.

Defendant in the Courts below contended that sound records having lateral undulations existed before the date of the Berliner invention in suit, and were patented by Berliner in several forms in different patents, which have expired.

The defendant also contended that such records are capable of use "with machines of various constructions" and that the making and selling of such sound records cannot be an infringement of the claims of the patent in suit.

It is submitted that it is clear that the defendant, the Leeds & Catlin Company, is shown to have infringed the claims of the patent in suit by making and selling disc sound records and reproducing means, the subject-

matter of claim thirty-five, operated in accordance with claim five of the patent in suit.

The making and selling of both the records and machines by the defendant is not disputed.

There is, therefore, clear proof of infringement.

It is true that the defendant manufactures disc records having lateral undulations of even depth, in hard resisting material, adapted and designed for use solely in connection and combination with a sound reproducing machine containing the reproducing apparatus forming with the record the combination specified in claim thirty-five, to be operated in accordance with claim five.

The proof is also clear that these sound records manufactured by defendant are the same as complainants' records and the sound records in the Graphophone Case, and constructed and sold to be used with the same reproducing apparatus.

It is also clear, from the proofs, that the reproducing apparatus of the defendant in this suit, is the same in construction and operation as the complainants' and as defendant's reproducing apparatus in the Graphophone suit, and constructed and sold to be used with the same construction of records as the complainants' and as the defendant's records in the Graphophone suit. (Record, Kennedy affidavit, p. 59, etc.)

As stated by Mr. Kennedy (R. p. 61, Fol. 182):

> "This Defendant's Sound Record in the present suit is adapted, as in other devices (defendant's devices of the Graphophone suit), to be carried and rotated by the turntable, and the stylus of the sound box, engaging the spiral groove therein, causes lateral vibrations of the diaphragm, and these vibrations in the diaphragm set up the sound waves in the sound box and amplifying horn, while at the same time the sound box and stylus are automatically propelled across the surface of the record, by reason of the record groove itself, and independently of any other means of mechanism."

It is also shown by Mr. Kennedy's affidavit (R. p. 62, Fol. 185):

> "The Complainants' Exhibit, Defendant's Machine and Defendant's Sound Record are manufactured for use in connection with each other, and are so used, and in my opinion are incapable of use in any other connection in a practical manner."

It is shown by the affidavit of A. C. Middleton, Secretary of the Victor Talking Machine Company (R. p. 52):

> "Furthermore, the operation is the same and both in Complainants' and Defendant's machines and records the machine is only capable of use in connection with the record of this description, and the record is only capable of use in connection with a machine of this description——"

The defendant strenuously contends that it has what they call a "mechanical feed" machine, which does not infringe claims five and thirty-five of the patent in suit.

Re Talk-O-Phone With Alleged Mechanical Feed.

Mr. Hicks, in his affidavit (R. p. 96), refers to a Talk-O-Phone with so-called "mechanical feed," which he says was "first suggested by me."

This so-called "mechanical feed" Talk-O-Phone is not proven to have been on the market, and was also brought forward in the Contempt Proceedings, and was briefly and very properly, it is submitted, dismissed from consideration in said Contempt Proceedings by the Circuit Court of Appeals (Contempt Record, p. 92, fol. 140) with the remark that:

> "We regard the feed-device machine either as a curiosity or a pretence."

We would call attention to this so-called "mechan-

ical feed" device, of which an exhibit, marked "Exhibit A", is said to be produced, as we submit it is clear evidence of weakness on the part of the defendants.

Defendants contend that this "mechanical feed" device is not an infringement of claims five and thirty-five.

It has only been advertised since Judge Hazel's decision of the Court below in the Graphophone Case, and the application for the patent referred to in Mr. Hicks' affidavit (R. p. 96, Fol. 287), evidently has been filed since that date, as he states that the first action of the Patent Office thereon was dated March 8, 1906. He also shows that only claims 8, 9, 10 and 16 have so far been allowed.

This is manifestly the *great and most valuable patent,* which is advertised in the defendants' sensational advertisements. It is here admitted, by Mr. Hicks, that the patent has not been formally allowed, but that no objection has, as yet, been made to claims 8, 9, 10 and 16 covering the alleged "mechanical feed" device.

These claims cannot be very valuable, if Mr. Hicks' contention is true that this alleged mechanical feed device "was based essentially upon English Patent No. 1644, of 1878, to Edison, and especially on Figures 1-10 thereof and upon other earlier letters patent herewith offered in evidence showing the positive feeding mechanism for reproducing stylus or other like instrument across the face of the record. * * * "

Manifestly, this alleged "mechanical feed" device, however, is nothing but an attempt at evasion of claims five and thirty-five of complainants' patent in suit, and the mechanical feed has no useful function to perform. The device will operate better without it than with it.

The mere fact that the defendants have evidently gone to so much trouble and expense in devising the so-called "mechanical feed" machine, is strong evidence of their weakness in the defense of the machines in

the present motions. If they had substantial belief in the defences which they now present upon these motions, they would have no need of resorting to such means as devising a way out through the assistance of the so-called "mechanical feed" machine.

It is obvious that the object of the getting up of this Talk-O-Phone machine was to get away itself from the infringement of claims five and thirty-five of the patent in suit, which it manifestly believed were valid, and also to furnish an excuse to record manufacturers, such as defendant, for making disc records, so that the defendant could argue that their records were intended for use on the so-called "mechanical feed" machine, and, therefore, did not infringe the patent either by contributory infringement, or otherwise.

This plan of marketing the Talk-O-Phone machine, which has not materialized, as none of these "mechanical feed" machines have been placed upon the market, is an obvious one, and, we submit, should be signally discountenanced by this Honorable Court.

The fact is, as shown by complainants' proofs before referred to, that outside of the complainants' machine, there is no talking machine upon the market with which such records as manufactured by the Leeds & Catlin Company could be used, except the infringing machines.

Defendant's Attempt to have "Mechanical Feed" Machine Adjudicated.

This so-called "mechanical feed" machine has not been offered in this case as alleged infringing machines, and is not an issue now in these suits. It is manifest, however, that the object of the defendant in introducing these so-called "mechanical feed" machines into these cases by the affidavits and Exhibits A and B is to have the Court express some opinion as to whether or not

these so-called "mechanical feed" machines infringe claims five and thirty-five of the patent in suit.

As this involves a somewhat different discussion from that raised by the infringing machines in evidence in these cases, complainants have refrained from elaborating this argument with a full discussion of these machines with the so-called "mechanical feed," and presume that the Court does not desire, without the benefit of a full discussion, to say whether these so-called "mechanical feed" machines are, or are not, mere attempted evasions of claims five and thirty-five of the patent in suit.

It is obvious that this so-called "mechanical feed" machine is conceived for the purpose of evading the claims of the patent in suit.

The Courts below very properly refused to consider the exhibit, as it was not one of defendant's machines purchased by the complainants, or charged with infringement in this case. *As before pointed out, the said machines are not on the market.*

The obvious attempt of the defendant is to have these machines adjudicated in this case.

The Record is an Element of the Combination of Claim Thirty-five, and the Reproducing Apparatus is Another Element.

It should require no argument to convince that a patentee is entitled, under the statute, to the monopoly of manufacturing and selling the whole combination going to make up his patented device.

If the defendant's contention were true, the patentee would be only entitled to the monopoly of making and selling parts which constitute half, or a fraction, of the patented structure.

Again, which half of the patented structure would

the patentee have the monopoly on, if not upon the whole?

If a party, not the patentee, has a right, without license, to make one-half of the patented structure, which half, or portion, is he entitled to make?

If a party, not the patentee, is entitled to make one half of the patented structure, why would not some other party, not the patentee, be entitled to make the other half of the patented structure?

The contention of the defendant is practically reduced to this proposition, for if defendant's counsel's argument be good, the Leeds & Catlin Company would be entitled, without liability, to make the sound record forming one element of claim thirty-five, and another company, by the same course of reasoning, could not be precluded from making the other part, viz., the reproducing apparatus, with the stylus shaped for engagement with the record, mounted to be used in connection with the traveling tablet having a sound recording stylus shaped for engagement with the record, and free to be vibrated and propelled by it.

If the one proposition be true, the other proposition should be true, and between the two defendants the patentee would have nothing.

They could also thus use the method of claim five.

Authorities.

While it is hardly necessary to cite authorities in support of complainants' contention on this point, but a few are referred to.

Thomson-Houston Electric Co. v. Ohio Brass Co., 80 Fed. Rep. 712.

This was a decision of the Circuit Court of Appeals of the Sixth Circuit, wherein it was held:

"It is well settled that where one makes and sells one element of a combination covered by a patent with the intention and for the purpose of bringing about its use in such a combination he is guilty of contributory infringement and is equally liable to the patentee with him who in fact organizes the complete combination. The leading case on the subject is Wallace *v.* Holmes, 9 Blatchf. 65, 29 Fed. Cas. 79. It was cited with approval in Tie Co. *v.* Simmons, 106 U. S. 89, 1 Sup. Ct. 52, and the same doctrine was applied and extended by this Court in Heaton-Peninsular Button-Fastener Co. *v.* Eureka Speciality Co., 77 Fed. 288, to a case where the articles sold was not even an element of the patented combination, but was an article the use of which in connection with patented combination was a violation of the conditions of a license and destroyed the protection the license would otherwise have afforded. The cases in the Circuit Courts where the same general principle has been applied are legion. We cite a few of them: Bowker *v.* Daws, 3 Fed. Cas. 1070; Richardson *v.* Noyes, 20 Fed. Cas. 723; Travers *v.* Beyer, 26 Fed. 450; Willis *v.* McCullen, 29 Fed. 641; Alabastine Co. *v.* Payne, 27 Fed. 559; Celluloid Manuf'g Co. *v.* American Zylonite Co., 30 Fed. 437."

The Court also stated, in this connection, that many of the most valuable patents have the combination of non-patentable elements, and that the only effective mode of preventing infringement is by suits against those who, by furnishing the parts which distinguish the combination, make it possible for others to assemble and use the combination, and who, by advertisement of the sale of such parts, and otherwise, intentionally solicit, and promote such invasions of the patentee's rights.

The Court also held that one who makes articles which are only adapted to be used in the patented combination, and offers them for sale to the public, will be presumed to **intend the natural consequence of his acts,**

and will, therefore, be held to intend that they should be used in the combination of the patent, and that an injunction will be granted.

The attention of the Court is also called to the following cases:

Wallace *v.* Holmes, 29 Fed. Cas. 79;
Red Jacket Mfg. Co. *v.* Davis, 82 Fed. Rep. 432;
Thomson-Houston Electric Co. *v.* Kelsey Co., 75 Fed. Rep. 1005;
Tubular Rivet & Stud Co. *v.* O'Brien, 93 Fed. Rep. 200;
Stearns *v.* Phillips, 43 Fed. 792;
New York Filter Co. *v.* Jackson, 91 Fed. Rep. 422;
Westinghouse Elec. Mfg. Co. *v.* Dayton Fan & Motor Co., 106 Fed. Rep. 724;
Bement *v.* National Harrow Co., 186 U. S. 90.

In the case of American Graphophone Co. *v.* Amet. 74 Fed. Rep. 789, Judge Grosscup held that the sale of records infringes the combination claim of the rest of the machine of which the record forms a part. The Court further held that the sale of records on the open market does not "release this element of the combination from the monopoly of the patent."

In the case of American Graphophone Co. *v.* Leeds, 87 Fed. Rep. 873, Judge Shipman held that the making and selling of the reproducer of the patented talking machine alone, with the intent that it was to be used with sound records made and sold under a patent covering a combination of the record and reproducer, is an infringement.

In the case of American Graphophone Co. *v.* Hawthorne, *et al.*, 92 Fed. Rep. 516, Judge Dallas held that the sale of a machine, which was useful only in making

patented records, infringed the Bell & Tainter patent for such records.

This question also is very fully considered in the Contempt Proceedings to be argued with this case.

It is submitted that it is unnecessary to cite further authorities in support of complainants' contention.

RE DEFENDANT'S AFFIDAVITS.

Affidavit of Harry Ensign.

The affidavit of Harry Ensign (Record, p. 98, etc.), on behalf of the defendants, is mainly to support the contentions made in Mr. Hicks' affidavit, and a portion of it is a substantial copy of Hicks' affidavit. One or two other points, not touched on by Mr. Hicks, are referred to by Mr. Ensign. Mr. Ensign is the superintendent of the Talk-O-Phone Company, and states that the capital stock was $500,000, then recently increased to $1,000,000. He does not state how much cash has been paid for this stock—only the broad statement that several hundred thousand dollars have been invested by the Talk-O-Phone Company in its factory and plant. (This Company has since gone into the hands of a Receiver.)

As hereinbefore pointed out, the delay in this suit has been mainly due to the demurrer filed by the defendant, on grounds which have been proven by the decision of Judge Holt to be absolutely unfounded, which occupied practically a year. One of the grounds demurred to was that the patent in suit was void on its face for want of patentability, and another that the complainants did not show legal title in the United States Gramophone Company, which question has been clearly adjudicated in another suit by Judge Platt in the Connecticut Circuit. (118 Fed. Rep. 50.)

Mr. Ensign also attempts to reverse the decision of the Court of Appeals (R., p. 73) regarding Fig. 10 of the Berliner Patent, No. 564,586, on the alleged ground that it is inoperative (Rec., p. 106, fol. 318).

We would here state, with all deference to Mr. Ensign, that a model of this Fig. 10 was produced by Mr. Berliner in evidence in the Graphophone Case, and operated in the Court of Appeals at the hearing. Further, Mr. Berliner's evidence, which has been passed on by the Court in the Graphophone Case, shows that Mr. Berliner made one of these devices similar to Fig. 10 and operated it in about 1887.

The Court of Appeals has decided that this Fig. 10, and description thereof, in the U. S. Berliner Patent, No. 564,586, is sufficient to carry the date of invention of claims five and thirty-five of the Patent, No. 534,543, in suit, back to the filing of the first mentioned application, in November, 1887. (R. p. 73.) Mr. Ensign also differs from the Court of Appeals, and the Circuit Court, in regard to the showing of Mr. Berliner's invention in claims five and thirty-five in the "Electrical World" of November 12, 1887.

While Mr. Ensign also refers to the Talk-O-Phone so-called "mechanical feed" machine, Exhibits A and B, nowhere does he state, nor is it stated in any of the defendant's affidavits, that this machine has ever been sold or placed upon the market.

Re Defendant's Affidavit of Albert T. Irish.

Mr. Irish is the president and treasurer of the Talk-O-Phone Company. (R. p. 309.)

Mr. Irish complains of the damage done to the Talk-O-Phone business by circulars of the Victor Talking Machine Company. These circulars were merely legitimate notices of infringement to the Talk-O-Phone

Company of the Victor Company's patents, and particularly of the patent in suit.

Both the Talk-O-Phone Company and the Leeds & Catlin Company are pirates of complainants' inventions and have copied the complainants' machines and records, protected by the claims of the patent in suit, almost identically, without any license or right whatsoever, and in defiance of complainants' rights, after the complainant, by the expenditure of hundreds of thousands of dollars, has established a large business throughout the world.

Such pirating concerns deserve no consideration from this Court.

Mr. Irish states that the records in suit are capable of use with machines of different descriptions; for instance, with the Talk-O-Phone provided with the so-called "mechanical feed," and with talking machines manufactured according to the patents prior to the patent in suit, which he says have been upon the market for many years.

There is no evidence of the allegation made by Mr. Irish that talking machines manufactured in accordance with certain patents prior to the patent in suit have been upon the market for many years, and such is not the case, as there are no machines upon the market, and never have been, other than those manufactured in accordance with the Berliner patents, to which the records in suit were adapted, for sound-reproducing purposes. The defendant may produce one or two in Court from their laboratory or factory, but this is no evidence that they are or have been upon the market, and every one of defendant's affidavits referring to the so-called "mechanical feed" are *guardedly worded, to avoid saying they are upon the market.* They have advertised this device, but *never sold it.* It is true that records similar to those in evidence have been used on other machines than the complainants', and can be re-

produced on other machines than complainants', but these are infringing machines, such as the defendant's machines, built and operated in infringement of claims five and thirty-five of the patent in suit. There is nothing in the Edison Patent, No. 1644, of 1878, or in the Bell & Tainter patents, both of which were before the Court of Appeals in the Graphophone Case, which shows a construction of machine similar to claim thirty-five in suit, or any method similar to claim five.

The records similar to those in suit are an essential part of claims five and thirty-five of the patent in suit, as is evidenced by a reading of the same.

All the records sold by the defendant similar to the exhibits in suit were sold for the purpose of reproducing sound in connection, and in combination, with the structure of machines in suit, and for no other purpose, and *vice versa.*

The record, such as defendant's records in suit is unquestionably an essential part of the apparatus claimed in claim thirty-five, and of the method claimed in claim five.

The machines which Mr. Irish refers to are probably toy machines, such as the "Amet" machine in evidence in the Graphophone Case, with the vertically undulating record, and which, at best, does not represent the prior, but the *subsequent art,* and which could not reproduce sound from the records, similar to defendants' records in suit.

Mr. Irish states that Mr. Hicks, as counsel, advised the Talk-O-Phone Company that the patent in suit expired before the organization of the company, by reason of the expiration of the Berliner foreign patents, and that they have invested hundreds of thousands of dollars in their plant and business, relying upon this fact.

While this advice may be unfortunate, the infringement still remains.

Defendant's Affidavit of Edward F. Leeds (No. 1).

This affidavit of Mr. Leeds (R. p. 115) is for the purpose of corroborating Mr. Hicks' and Mr. Ensign's affidavits relative to some of the statements made therein regarding the foreign patents referred to in discussing Hicks' affidavit.

He also differs with the Court of Appeals in the Graphophone Case, regarding the practicability of Fig. 10 of the Berliner Patent, No. 564,586, and states that he has made certain experiments regarding the operation of the same.

We do not dispute the proposition that it might be possible to make one of these devices so that it would not work.

As hereinbefore pointed out, however, any matter of any relevancy in this case regarding Fig. 10 has been already adjudicated by the Court of Appeals.

Defendant's Affidavit of Edward F. Leeds (No. 2).

Mr. Leeds, in this affidavit (R. p. 292), is evidently attempting to confirm some of the propositions set forth in Mr. Irish's affidavit hereinbefore considered.

He differs with the Court of Appeals regarding the Edison British Patent, No. 1644, of 1878, manifestly from the statements in Mr. Irish's affidavits regarding the same. The same criticisms as to the facts set forth in Mr. Irish's affidavit, apply also to Mr. Leed's affidavit No. 2 in many particulars.

While Mr. Leeds, in affidavit No. 2, seems to desire to convey the idea that the so-called "mechanical feed" machine of the Talk-O-Phone is upon the market, he nowhere, in his affidavit, makes that direct statement.

We admit that they are extensively advertised, and it may be that a few have been exhibited, but we deny that they are upon the market, or have been sold to the trade or to the public, as yet.

Mr. Leeds also pleads, as an excuse for their infringing acts, that the defendants thought that the claims of the patent in suit had expired.

Re Defendant's Affidavit of Harry T. Goss.

The affidavit of Mr. Harry T. Goss (R. p. 297), refers to the suit of these complainants against the American Graphophone Company, and to the Bell & Tainter Patent, No. 341,214, and Edison British Patent, No. 1644, of 1878. Mr. Goss discusses the Bell & Tainter Patent, No. 341,214, and thinks that the Appeal Court in the Graphophone Case, has misunderstood the Bell & Tainter Patent, and refers to the deposition of Chichester A. Bell, one of the joint inventors of Bell and Tainter, in the suit of the American Graphophone Company *v.* The National Gramophone Co., in October, 1900, copy of which is said to be annexed and marked Schedule A. Mr. Goss also refers to a paper deposited by Messrs. Alexander Graham Bell, Sumner Tainter, and Chichester A. Bell in the Smithsonian Institute, in October, 1881, forming part of the record in the American Graphophone Co. *v.* American Record Co. in United States Circuit Court for the Southern District of New York. This latter paper is referred to as the "Volta Laboratory Description." There is nothing, however, in the portion quoted by Mr. Goss in his affidavit in this matter which has any bearing upon the claims five and thirty-five of the patent in suit, the Volta Laboratory description having merely *suggested* the recording of "a wavey or zig-zag line of uniform depth." This was one of the experiments in wax of these gentlemen. Mr. Goss seems to think that as they had a horse shoe, they must have had a horse; in other words, as they thought of a zig-zag record in wax, they also must have thought of a machine of the construction of the claims in the patent for reproducing therefrom. Mr. Goss also fur-

ther discusses the Bell and Tainter patent, which was before the Court of Appeals and held not to anticipate, and seems to think that the Court of Appeals may have taken a wrong view of this Bell and Tainter patent. Mr. Goss then refers to Schedule A (R. p. 304), before referred to. He says that Dr. Bell shows the work done by Mr. Tainter and himself, and contends, from certain selected quotations from that deposition, that they must have anticipated the claims in suit.

RE "SCHEDULE A" (R., p. 304).

A careful reading of this deposition, referred to as Schedule A in the Goss affidavit, will show that what is hinted, or suggested, in his deposition, was *nothing more than an experiment* by Messrs. Bell and Tainter, and he refers, in this deposition to what they did, as **"experiments."** (See answer to Q. 8.)

Q. 8. (R. p. 306) inquired of the witness whether, prior to the application for the patent, No. 341,214, he was aware of the capacity of the record groove *"in various forms of records"* made by you to feed the reproducing stylus laterally across the record. No reproducing mechanism was referred to, and no particular form of record was referred to in the question or answer. His answer also shows that his experiments were with records in *wax*. His answer to Q. 9, quoted in Mr. Goss's affidavit, is very indefinite, as he does not state what "arrangement" he refers to by "that arrangement," but the arrangement mentioned in Q. 9 was a "mechanical form of apparatus." Dr. Bell also shows, by answer to Q. 9, that they found that "some *'feed mechanism'* should be added to the instrument, so as to make the reproducer roughly follow the motion of the record." He shows by answer to Q. 10 that you could not rely on a short lever to remain in the groove.

On cross-examination, he says in answer to XQ. 13, etc., as follows (R. p. 307):

"XQ. 13. Were your experiments with the laterally undulating records made at an earlier or a later date?

A. *I don't like to speak positively* on that point for the simple reason that I myself have not made many *experiments* of that kind, but my impression is that *experiments* of that kind were made very shortly afterward by Mr. Tainter.

XQ. 14. What was the object of making experiments on laterally undulating records, at a time when the vertically undulating cut wax record had been decided upon by you to have been a success and to be the record which you proposed to push?

A. Of course we had to make experiments to find out the best form and to make perfectly certain on that point, and that could only be done by experiments; in fact, we tried everything we could think of whether it seemed promising or not. Our specification does not include anything like the number of experiments we made.

XQ. 15. Is it not a fact that you obtained very much better results with your vertically undulating cut wax record than with any laterally undulating etched record you ever experimented with?

A. My recollection is that it was very hard to distinguish one from the other as far as results went, but the vertically undulating record was found in every way to be the most convenient, and that's why we adhered to it."

It appears by XQ. 13, and XQ. 16, that Dr. Bell, the witness, has not made many of the experiments of the kind himself, as the experiments were made by Mr. Tainter; that this was not his department, but that it was Mr. Tainter's department.

It is clear from this deposition of Dr. Bell, referred to in Mr. Goss's affidavit:

(1) That he nowhere describes any construction of apparatus alleged by Mr. Goss's affidavit to have been previously used by Bell and Tainter, prior to the Bell and Tainter Patent, No. 341,214 (R. p. 387), or prior to the invention in suit, similar to claims five and thirty-five.

(2) He nowhere states that Dr. Bell or Mr. Tainter ever *made or used* such an apparatus, or method.

(3) He states, in answer to Q. 8 that he was aware of the capacity of the "*various forms* of records" in which the groove was cut in *wax* to carry the reproducing style across the record.

(4) He shows by Q. 9 "such feed mechanism was added to the instrument so as to make the reproducer follow the movement of the record."

(5) It is evident from Q. 10 that their experiments were *unsuccessful,* and did not give satisfactory results, except where they used the positive screw feed mechanism, such as shown in the Bell and Tainter Patent, No. 341,214.

(6) He shows by XQ. 13 that at the time his deposition was given (October, 1900,) he did not like to speak positively regarding the dates of the experiments on laterally undulating records in wax, and that "I, myself, did not make many experiments of that kind, but my *impression* is that *experiments* of that kind were made very shortly after that time by Mr. Tainter."

(7) That their experiments were of a general character, is evidenced by the statement in answer to XQ. 14, "*In fact, we tried everything we could think of whether it seemed promising or not.*"

(8) XQ. 15 shows that Bell and Tainter, after their

various experiments, adhered to the *vertically* undulating record.

(9) XQ. 16 shows that Mr. Bell does not desire to speak positively regarding the method of making the laterally undulating record, which they experimented with.

(10) XQ. 16. As before stated, he shows that this was not his department and that "This section of the work was done chiefly by Mr. Tainter."

(11) XQ. 17 shows that Mr. Tainter was still alive. *Mr. Tainter, however, though manifestly the most important witness, if this evidence was important at all, was not called."*

This evidence of Dr. Bell was within the knowledge of Mr. Mauro, counsel for the defendant in the recent suit of the Victor Talking Machine Company, *et al. v.* American Graphophone Company, as he was counsel for the American Graphophone Company when Dr. Bell's deposition was taken in 1900, and examined the witness, and if this testimony had been of any value, Mr. Mauro most certainly would have put it in evidence in the case of these complainants against the American Graphophone Company for infringement of this patent. He knew, however, that all of Dr. Bell's and Mr. Tainter's work on the lines referred to in the deposition were purely experimental; that they never accomplished material results, or built a tangible apparatus similar to the invention in suit, and that what few *experiments* they did make determined them to *abandon* this line of work before their application for the Bell and Tainter Patent, No. 341,214, and to adopt as they did the *vertically* undulating record of uneven depth in wax-like material for reproducing sound through the medium of positively mechanical fed talking machines,

illustrated and described in the Bell and Tainter Patent, No. 341,214, which was so thoroughly considered and reviewed in the Court of Appeals in the Graphophone Case, in the suit on this Berliner Patent.

Re Joseph Lyons' Testimony.

Nor is this matter entirely new to the record in the case of these complainants against the Graphophone Company. We would call attention to the evidence of Mr. Joseph Lyons, one of complainants' witnesses, who was well acquainted with Dr. Bell and Mr. Tainter, the parties referred to. Mr. Lyons was asked in cross-examination (XQ. 22), Graphophone Record, page 37, a copy of which is submitted:

> "XQ. 22. I take it that you are ignorant of the following facts which are within my knowledge, namely, first, that the very first sound record made by Bell and Tainter and to which they gave the name graphophone were of the laterally undulating type; and, second, that specimens of sound records of this kind and of an instrument for making them, together with a written description wherein the word graphophone was disclosed thereon were deposited by those inventors in the Smithsonian Institution in the year 1883, and are still on deposit there?
>
> (Objected to as incompetent.)
>
> A. I have heard rumors to this effect, or substantially this effect. I was informed at an early time of Mr. Berliner's work that Bell and Tainter had experimented in the direction of making a laterally undulating sound record in the surface of a tablet that was covered with beeswax, or some composition into which beeswax entered. At the same time and by the same informant I was also told that the thing was a total failure. This information came to me, I think, from Mr. Tainter. Possibly, however, it was Mr. Bell who spoke to me about it. I can, if it is desired, ascertain, if time is given to me, which of these two inventors have given me

this information. The occasion for this information was a conversation which I had either with Mr. Bell or with Mr. Tainter about Mr. Berliner's gramophone. My informant expressed himself as delighted at the success achieved by Mr. Berliner, and at the same time told me that he, in conjunction with his co-worker, attempted the same thing, but did not succeed; and at the same time he told me that he can now see why they failed."

It is, therefore, clear that both the matter of Dr. Bell's testimony, and of the Volta Laboratory description, deposited in the Smithsonian Institution was referred to by Mr. Lyons, in his deposition in the case of Victor Talking Machine Co. *v.* The American Graphophone Co., on the suit on this patent and before the Court of Appeals.

Mr. Lyon shows that Dr. Bell or Mr. Tainter told him that they, Bell and Tainter, had *attempted* the same thing as Mr. Berliner, but did not succeed, and that they could then see, since Berliner's invention why they failed and expressed himself as "*delighted at the success achieved by Mr. Berliner.*"

RE TITLE.

It is respectfully submitted that the title of the complainants has not been attacked, either in the Circuit Court on motion for preliminary injunction, or in the Circuit Court of Appeals, and that, therefore, this question, not being before either of these Courts on the motion for preliminary injunction, should not be the subject of review in this Honorable Court. See U. S. *v.* Bell Telephone Co., 167 U. S., p. 224, and cases therein cited upon this subject, and hereinbefore referred to in this brief. As the defendant, however, has suggested such a defense in one of his assignments of error, we take the precaution of briefly considering the subject here.

The defendant attacked the title of the complainants in this case on demurrer, in the U. S. Circuit Court, which was fully argued before Judge Holt. On October 31, 1905, an opinion was filed (F. R.). Judge Holt said, *inter alia:*

> "In my opinion, therefore, the United States Gramophone Co. is the owner of the patents, and the Victor Talking Machine Co. is the sole licensee under the patents, and under the authorities they are the proper complainants."

The demurrers were overruled. The defendant's counsel, Mr. Hicks, in his affidavit in this case (R., pp. 76-77, fols. 228-229), refers to these demurrers.

The defendant never put in any evidence in this case attacking the complainants' title to the patent in suit.

The attention of the Court is also called to the decision of Judge Platt, in the suit of these complainants against the American Graphophone Co., District of Connecticut, October, 1902, 118 Fed. Rep. 50), where the title of these complainants to the patent in suit was sustained on demurrer, the Court there holding that the Berliner Gramophone Co., which had also been made a party complainant, in conjunction with these complainants, was an unnecessary party (the demurrer was sustained as to the Berliner Gramophone Co.).

In the subsequent proceedings in the motion for preliminary injunction in the present suit, the defendant made no attack upon or defence as to complainants' title, by reason probably of the fact that the question of title had been previously decided by Judge Holt on demurrer; and again perhaps by reason of the fact that the question of title had been fully adjudicated in the Graphophone Case, which record is before this Court. Therefore, it is respectfully submitted that this question should not be considered by this Court, on review in these motions for preliminary injunction.

The Granting of a Preliminary Injunction is within the DISCRETION of the Circuit Court. If Discretion not Improvidently Exercised, Injunction should Stand.

It is hardly necessary to cite authorities in support of this proposition. If the *discretion* of Judge Townsend in granting the injunction in this case, in the Circuit Court, was not improvidently exercised under the facts and circumstances of the case, the U. S. Circuit Court of Appeals for the Second Circuit, upon so finding, and it did so find, would not reverse the Court below under the well established authorities.

As this appeal before this Honorable Court is an appeal from the decree of the U. S. Circuit Court of Appeals, this Court in reviewing this case, is in the same position as the U. S. Circuit Court of Appeals, and it is submitted would be guided by the same authorities. If, therefore, this Court under the facts presented, should find that the *discretion* exercised by the Circuit Court in granting the preliminary injunction was not improvidently, or erroneously, exercised, the decision of this Court should, therefore, be the same as that of the Court of Appeals, and the decree of the Circuit Court should be affirmed.

We take the liberty of citing a few authorities of the lower Federal Courts supporting this proposition that the decree of the Circuit Court granting the preliminary injunction should not be reversed unless there was an abuse and an improvident exercise of the judicial discretion.

Duplex Printing Press Co. v. Campbell Printing Press & Manufacturing Co., 69 Fed. Rep. 250.

This is the case in the Circuit Court of Appeals for the Sixth Circuit, referred to in the preceding quota-

tion. The opinion was written by Judge Taft, and the following from page 252 thereof is in point:

> "The motion for a preliminary injunction necessarily involved the exercise by him of a sound judicial discretion in granting or withholding it. * * * We are to consider the correctness of the order from the same standpoint as that occupied by the Court granting it, and if we find, after consideration of the grounds presented to that Court for its action, that its legal discretion to grant or withhold the order was not improvidently exercised, we should not disturb its action."

Ritter v. Ulman, et al., 78 Fed. Rep. 222.

Judge Simonton, speaking for the Circuit Court of Appeals of the Fourth Circuit, stated on page 224:

> "The granting or the refusal of an injunction rests in the sound discretion of the Court. Poor *v.* Carleton, Fed. Cas. No. 11,272. It is a power requiring great caution, deliberation, and sound discretion, and involves responsibility. The right set up must be clear, the injury must be impending, and so threatened that it can be averted only by the preventive process of the Court. The judge who granted this injunction has had great and unusual experience. He was possessed of all the facts of the case, and of the peculiar circumstances surrounding it. His exercise of his discretion, no doubt, was the result of calm deliberation. It could only be set aside for manifest error in the conclusion he reached."

Garrett, et al., v. T. H. Garrett & Co., 78 Fed. Rep., 472.

This was a case in the Circuit Court of Appeals for the Sixth Circuit, and Judge Sage, writing for the Court, said on page 477:

> "The rule of this Court not to disturb the action of the Court below, unless the discretion of

the Judge was improvidently exercised, was recognized by the Circuit Court of Appeals of this circuit in Duplex Printing Press Co. *v.* Campbell Printing Press & Manuf'g Co., 16 C. C. A., 220, 69 Fed. 252. The granting and withholding of a preliminary injunction is largely within the discretion of the Judge who passes upon the application for it, and there are many considerations which may be even controlling without reference to the merits of the question at issue."

Blount v. Societe Anonyme Du Filtre Chamberland Systeme Pasteur, et al., 53 Fed. Rep. 98.

This was another case in the Circuit Court of Appeals for the Sixth Circuit, the opinion being written by Judge Jackson, who stated on page 100:

"The single question presented for our determination on said appeal is whether the order of the lower Court awarding the injunction was erroneous or improvident, under the facts and circumstances of the case, as disclosed by the motion papers on which its action was based."

Paris Medicine Co. v. W. H. Hill Co., et al., 102 Fed. Rep. 148.

In the opinion of this case, Judge Lurton says on page 153:

"In Proctor & Gamble Co. *v.* Globe Refining Co., 34 C. C. A. 405, 406, 92 Fed. 357, this Court refused to reverse the action of the Court below in denying a temporary injunction, upon the ground that it was not so plainly apparent that the Court below had made a mistake as to justify a reversal of its action in a matter in which much must be left to the discretion of the Court below. The trial of the question, upon appeal from an order granting or denying a preliminary injunction, especially when the action of the Court below was based

in large part upon conflicting affidavits, is not as if the appeal was from a final decree upon the merits. In the case cited above, this Court, speaking by Judge Severens, said:

> 'This being an appeal from an order denying a preliminary injunction, the question to be determined is whether the discretion of the Court below was improvidently exercised, and not whether, upon the final hearing, upon full view of all the facts in the case, this Court would, upon the evidence before it, reach the same conclusion as that of the Court below. Duplex Printing Press Co. *v.* Campbell Printing Press & Mfg. Co., 16 C. C. A. 220, 69 Fed. 252; Garrett *v.* T. H. Garrett & Co., 24 C. C. A. 173, 78 Fed. 472. To justify this Court in reversing an order of this kind, it must be quite clearly apparent that a mistake was committed by the Court below. Ritter *v.* Ulman, 42 U. S. App. 263, 24 C. C. A. 71, 78 Fed. 222.'

"The ruling of Judge Swan, who heard this case in the Court below, was based upon certain conclusions of fact, already stated, drawn from conflicting *ex parte* affidavits. In this situation of the case, we are not so clearly convinced that there has been such a plain error as to justify a reversal. The decree will therefore be affirmed."

THE DEFENDANT'S ACTS.

It is respectfully submitted that the acts and attitude of the defendant in this cause have been throughout the whole proceedings such as tend to show **a want of good faith** on its part, and that from the very incipiency of the infringement, its attempt has been not only to use and enjoy without license or right complainants' invention patented by the patent in suit, and without the payment of any royalty (for which patent, together with the other Berliner patents, the Victor Talking

Machine Company paid $800,000), but the defendant from the very beginning **copied complainants' said patented commercial machines and records almost identically as to shape, size, form and general appearance,** so that it was difficult even for the trade to distinguish between the complainants' and defendant's commercial records and machines, to say nothing of the deception practiced upon the public. A comparison of the complainants' and defendant's machines and records in evidence only is necessary to prove this fact.

Further, the preliminary injunction in this case, sustained by the Court of Appeals, had hardly been granted before this defendant, the Leeds & Catlin Company, continued the manufacture and sale of the infringing records for use with the reproducing apparatus, comprising the structure of claim thirty-five, to be operated in accordance with claim five, in direct violation of the injunction writ served upon the defendant in conformity with the decree of the Court. For this, **contempt proceedings** were at once instituted, and the defendant held in contempt, the Court imposing a fine. This decision of the lower Court by Judge Lacombe was duly affirmed upon appeal, by the U. S. Circuit Court of Appeals for the Second Circuit. These contempt proceedings are now before this Honorable Court at this time upon writ of error, and are considered in a separate brief.

The security entered by the defendant in the Circuit Court pending appeal to the Circuit Court of Appeals may be inadequate to cover the damages and profits which might arise during the period of appeal to the U. S. Circuit Court of Appeals, and is utterly inadequate to protect the complainants during the pendency of this appeal in this Honorable Court.

It is respectfully submitted, as before submitted, that the defendant has not only pirated the complainants' invention, after they had made a world-wide suc-

cess for the Victor talking machines and records, but has so closely copied the complainants' machines and records as to mislead the public into the belief that the defendant's machines and records were the celebrated Victor talking machines and records.

CONCLUSION.

It is respectfully submitted, as hereinbefore shown, that the discretion of the Circuit Court was providently and wisely exercised in accordance with the law and the facts; that the decision of the Circuit Court of Appeals for the Second Circuit affirming the decree of the Court below was without error and in conformity with the law and the facts in the exercise of equity jurisdiction, and that the complainants are entitled to the preliminary injunction prayed for in the bill of complaint, and that the decree of the Circuit Court of Appeals for the Second Circuit should be affirmed with costs to the complainants.

All of which is most respectfully submitted.

HORACE PETTIT,
Counsel for Complainants.

December 12th, 1908.

Reported 140 Fed. Rep., p. 860.

UNITED STATES CIRCUIT COURT, SOUTHERN DISTRICT OF NEW YORK.

IN EQUITY.

Victor Talking Machine Company and United States Gramophone Company,

Complainants,

v.

American Graphophone Company,

Defendant.

HORACE PETTIT, of counsel for complainants.

ELISHA K. CAMP, for defendant.

PHILIP MAURO, C. A. L. MASSIE, of counsel.

HAZEL, *District Judge:*

The bill is in equity and relates to the infringement of Letters Patent No. 534,543, issued February 19, 1895, to Emile Berliner, assignor to complainants, on application filed March 30, 1892, for improvements in a talking machine commonly known as the "gramophone." The apparatus to which the improvements relate, is constructed to record and reproduce vocal sounds. The patent has thirty-five claims, of which claim five, for the process and thirty-five for construction of the recording and reproducing apparatus, alone are involved. Such claims read as follows:

> "5. The method of reproducing sounds from a record of the same, which consists in vibrating a stylus and propelling the same along the record by and in accordance with the said record, substantially as described.

"35. In a sound reproducing apparatus consisting of a traveling tablet having a sound record formed thereon and a reproducing stylus shaped for engagement with said record, and free to be vibrated and propelled by the same, substantially as described."

At the date of the invention in suit it was not new to record sound and articulated words and reproduce the same by suitable mechanical agencies. Numerous defences are interposed in the answer, viz: anticipation, prior use, abandonment, and non-patentability. The objection is also urged that the Court is without jurisdiction, on the ground that complainants before the suit was instituted, agreed in writing to release the defendant from the payment of damages and to grant to it a license to use, sell and manufacture the patented machine provided the patent in suit was held valid by the Court. Such objection, however, which is erroneously sought to be sustained upon the authority of Root *v.* Railroad Co., 105 U. S., 189, is without merit. The principle is unassailable that where mere damages are sought to be recovered in an action for infringement of a patent, a court of equity will not interfere. But where the bill alleging infringement of an unexpired patent, demands damages and permanent injunction, equitable relief in a proper case will not be refused. A prior agreement by which the interested parties mutually agree upon terms of settlement on condition that the patent in controversy is sustained by the Court, cannot upon principle and authority deprive a Court of its inherent power and jurisdiction. McMillin *v.* St. Louis and Miss. Valley Transp. Co. (C. C.), 18 Fed. 260; Guaranty Co. *v.* Green Cove Rd. Co., 139 U. S., 137; to the same effect see Doyle *v.* Continental Ins. Co., 94 U. S. 535, Insurance Co. *v.* Morse, 20 Wall 445. It is insisted on the part of the defendant that the evidence

conclusively shows that there was a public use of the invention for more than two years prior to the application for the patent; that the inventor abandoned his right to the claims in suit by a postponement of them, and that in an earlier application for a patent, he described such claims in his specifications without, however claiming them. The complainants contend that the alleged prior public use was for the purpose of experiment, and that there was no abandonment in fact. To properly understand the defences, it is necessary to consider the state of the art and to briefly indicate the principles of the various talking machines commonly known and mentioned in the record. The references relied upon to anticipate the involved claims are, first, the Franklin Institute lecture by the patentee, on May 16, 1888; second, a publication by him in the Electrical World, on November 12, 1887, and third, the patents to Bell & Tainter, No. 341,214 dated May 4, 1886, and to W. Suess assignor to Emile Berliner, No. 427,279, issued May 6, 1890. In the British patent to Edison, No. 1644, dated April 24, 1878, for recording and reproducing vocal sounds, the air vibrations were recorded by a system of indentations upon a pliable or yielding material, as for instance, a thin sheet of metal or tin foil. The foil was ordinarily placed over a grooved substance and received impressions of the voice through the instrumentality of a movable, inelastic diaphragm, having at its end an indenting point or stylus. In order to effectuate the reproduction of sound vibrations, the point of the stylus was essentially kept in constant contact with the revolving record, cylinder or disc. This was accomplished by a mechanical device which propelled the stylus across the surface of the record. In the graphophone patent, issued to Bell & Tainter, the record was engraved or cut in wax-like or amorphous material. The form of cutting or engraving was in the

spiral groove of varying depth, the side of the walls sloping toward the bottom. The stylus, which curved in a downward direction, was kept in the groove by gravity and as the record rotated it was vibrated vertically, "in the direction of its length." It is shown by the evidence that the graphophone in one form, which is illustrated in the drawings attached to the patent, required mechanical means to propel the record past the reproducer diaphragm and stationary stylus. In another form a movable stylus attached to the diaphragm was propelled by an auxiliary device across the record so as to retain the stylus point in constant contact with the vertical undulations. These different forms of talking machines are disclosed by the patents of prior date. The common form of style being adapted to record and reproduce vocal sounds at the instance of the user, and the other to merely reproduce sound vibrations as had previously been recorded in accordance with the process of the patentee:

In the patent to Emile Berliner, No. 564,586, issued on July 28, 1896, application filed November 7, 1887, the process of recording and reproducing sound vibrations differs essentially from the method used in the phonograph and the graphophone. The specification described a process by which the sounds were inscribed upon a layer of non-resisting material, which was afterwards copied in a non-yielding material, from which the sounds were reproduced. The specification says:

> "The original record, as well as the copy of the same, is thus obtained as an undulatory line of even depth, as distinguished from the line of varying depth obtained by the ordinary phonograph and graphophone."

It is not disputed that such mode or process was a new and meritorious invention and that it was not merely a patent for the functional effect of the machine

in connection with which it was used. The earlier specification does not claim the method nor the details of construction of the claims in controversy; hence it is contended by the defendant, as will presently appear, that there was a surrender or waiver thereof. In the patent in suit two features of the invention are mentioned, one concerning the process or mode of recording sound upon a record tablet, the other as to the construction of the apparatus. Complainants contend, and the proofs show, that the stylus attached to the diaphragm is arranged so as to permit the same to vibrate laterally, and that owing to lateral undulations in the walls of the record groove, a desirable swaying motion is imparted to the reproducer diaphragm. Concededly, the lateral undulations in the record automatically guide or propel the stylus and diaphragm in its course over the disc from the outer circumference toward the center, and the stylus travels in an apparently direct radial path while at the same instant of time it is pulsated or incited by the sound waves.

The principle of operation in the Berliner machine is thought to be essentially different from that of the machine of Bell & Tainter. In the latter, an auxiliary joint or feed screw was necessary, as already stated, to effectuate the required passage of the record over the point of the stylus, or to cause the stylus and reproducer diaphragm to travel across the surface of the record. In complainants' patent, on the other hand, it is shown that the lateral vibrations of the stylus point and the propelling of the same over the face of the record without mechanical assistance and through the means of the groove alone was the primary object of the inventor. In the Suess patent is contained a description corresponding to the features of claim thirty-five in suit. The primary object of Suess, an employee of Berliner, however, was

merely to construct a suitable pivotal support for the diaphragm and stylus, so as to assist such device in its passage across the record. It is expressly stated in the specification of the Suess patent that the invention relates to improvements in the reproducing apparatus of Berliner, and that the construction and mounting of the stylus form no part of the invention. The improvement of Suess, therefore, is not an anticipation. Defendant insists that the Bell & Tainter specification fully described the Berliner process and specific combination. Such specification says:

> "The invention consists, fourthly, in loosely mounting the reproducing style, so that it is free to follow the record." And, further: "Preferably the reproducing style, or rather what may be called the 'head' of the reproducing instrument is mounted on an universal joint, and the style is pressed against the record by the yielding pressure of a spring or weight."

Stress is placed upon the language quoted; but from what has already been said regarding the Bell & Tainter patent, it is manifest that the principle of Berliner's invention rests upon the practicability of propelling the stylus in the groove across the surface of the record without a feed screw or other mechanism. By such adaption to what is known in the art as a zigzag record (complainants' record), certain imperfections in the talking machine were overcome, and sound, when reproduced, was rendered more intelligible. There was, I think, patentable novelty in the method which accomplished the results stated. The broad claims in suit in my judgment cannot be restricted to a record of even depth, such as described in the specification. The essence of such claims would seem to include a sound record, which, when in juxtaposition with a diaphragm and stylus propelled in the manner de-

scribed, is thereby enabled to successfully accomplish the primal object and purpose of the invention.

The next defences, prior use and abandonment, may be considered together. The proofs show that the patentee used his machine and gratuitously delivered a lecture in relation thereto in the City of Philadelphia, on May 16, 1888, to an audience of about two hundred persons, more than two years before the application in suit, and that prior thereto in the year 1887, he published an article in a periodical, the "Electrical World," relating to his said discovery. He expressly stated in his lecture that the exhibit machine was the hasty result of a new mechanism and the accomplishment should be measured by its future possibilities and not wholly by the demonstration. It is not claimed that there were any sales of the instrument at the time of the exhibition and lecture; indeed, it is conceded that the apparatus was not sold nor used by other persons until about six years later, when the patent in suit was issued. The mere exhibition of the machine to an assembled audience to hear an explanation of one's invention was not fatal to the patent under the authorities. Shaw *v.* Cooper, 32 U. S., 292; Egbert *v.* Lippman, 104 U. S., 333, Elizabeth *v.* Pavement Co., 97 U. S., 126; Eastman *v.* Mayor, etc., of the City of New York, 134 Fed. 844. That a complete disclosure was made of the described plan of mounting the reproducer diaphragm and stylus in the specification attached to the application filed November 7, 1887, is freely admitted. Such disclosures consisted of a machine constructed in accordance with the drawing (Fig. 10) of the earlier application. The diaphragm and stylus were mounted or suspended upon a conveyor arrangement having rollers. The inventor did not allow his invention, with his consent, to be embodied by other persons in a completed machine, and no profit or gain

until the patent was granted, was realized as a result of the invention. Moreover, the evidence and circumstances justify the assumption that the exhibition of the apparatus was purely experimental and in no sense a public use within the meaning of the statute. In Elizabeth *v.* Pavement Co., *supra*, the Supreme Court considered the meaning and application of the words public use. In the opinion it is stated:

> "But if the inventor allows his machine to be used by other persons generally, either with or without compensation, or if it is with his consent, put on sale for such use, then it will be in public use and on public sale, within the meaning of the law—Nicholson did not sell it, nor allow others to use it or sell it. He did not let it go beyond his control. He did nothing that indicated any intent to do so. He kept it under his own eyes, and never for a moment abandoned the intent to obtain a patent for it. In this connection, it is proper to make another remark. It is not a public knowledge of his invention that precludes the inventor from obtaining a patent for it, but a public use or sale of it."

This doctrine undoubtedly has application to the facts here. As already appears, the patent in suit was issued upon a later application than patent No. 564,586. Why the broad claims of the former were not made a part of the earlier application and specification does not appear. Defendant broadly contends that the fact of the omission by the patentee to claim the invention in the earlier application, considered in connection with the above mentioned publication in the "Electrical World" and public exhibition, was an abandonment and forfeiture thereof. It is true that the Revised Statutes (S. 4888) require the inventor to point out and distinctly claim the improvement or combination which he claims in his invention or discovery. If

he omits so to do, such improvement or combination being apparent on the face thereof, he is presumed to have abandoned the same and to have dedicated to the public that which is not claimed. Miller *v.* Brass Co., 104 U. S. 350; James *v.* Campbell, 104 U. S. 356; Sirrat *v.* Excelsior Mfg. Co., 61 Fed. 980; McBride *v.* Kingman, 97 Fed. 217. But it may be stated as a general rule that "a patent is never invalidated by the fact that the invention claimed in it was described but not claimed in a patent granted subsequently to the making of the application for the patent secondly issued, but before it was granted." This principle as enunciated by Judge Blatchford in Singer *v.* Braunsdorf, 7 Blatch., 521, is thought to apply. See also Thomson-Houston Elec. Co. *v.* Elmira & Horseheads Ry. Co., 69 Fed. 257. In any event it cannot justly be claimed, from the facts, that Berliner had done anything to indicate an intention to waive or surrender his discovery. To merely withhold a patent from the public has never been considered an abandonment, and the adjudged cases uniformly held that an inventor may have a patent for an invention described but not claimed by him, in a prior patent to himself. Graham *v.* McCormick, 11 Fed. 859; Vermont Farm Machine Co. *v.* Marble, 19 Fed. 307; Eastern Paper Bag Co. *v.* Standard Paper Bag Co., 30 Fed. 63. In the latter case the language of the Supreme Court in Miller *v.* Brass Co., James *v.* Campbell *supra,* was interpreted as applying to re-issue under the statute. It was broadly held that the description of another invention in a prior patent by the same inventor does not forfeit his right to afterward take out a patent for such invention. In this case the patent on the earlier application, as has been stated, was issued subsequntly to the patent in suit. I am unable to perceive how the patentee's failure to claim the invention described in

his earlier application can be construed as an abandonment thereof. It is true an abandonment of an invention by a patentee to the public is a question of fact and may be established by the patentee's intention to abandon, or by inferences consistent therewith. Rifle & Cartridge Co. *v.* Arms Co., 118 U. S. 22; Planing Machine Co. *v.* Keith, 101 U. S. 479. The burden, however, is upon the defendant to show that the invention was abandoned. Wyeth *v.* Stone, Fed. Cases No. 18,107. Nor indeed should evidence of abandonment rest upon doubtful or controverted inferences. The publication in the "Electrical World" is not entitled to the probative weight claimed by the defendant. The rule is that the prior publication, in order to anticipate, must fully and clearly describe the invention so as to enable the skilled in the art to completely understand it and reproduce the apparatus without assistance from the patentee, Badisch Ainlin & Soda Fabrik *v.* Kalle, 94 Fed. 163; Cohn *v.* Corset Co., 93 U. S. 366. The prior publication, based upon the article mentioned, is not within the rule stated. The elicited facts are thought to be foreign to sustaining the asserted defences, and hence infringement not being controverted, complainants are entitled to a decree adjudging the validity of the patent and its infringement and for an injunction against the use of the machines or devices made in violation of claims five and thirty-five of the patent in suit with costs.

Reported 145 Fed. Rep., p. 351.

IN THE UNITED STATES CIRCUIT COURT OF APPEALS, SECOND CIRCUIT.

Before LACOMBE, TOWNSEND and COXE, *Circuit Judges.*

Victor Talking Machine Company and Another,
Complainants-Appellees,

v.

American Graphophone Company,
Defendant-Appellant.

HORACE PETTIT, of Counsel for Complainants-Appellees;

PHILIP MAURO, of Counsel for Defendant-Appellant.

This cause comes here upon appeal from a decree of the Circuit Court, Southern District of New York, sustaining the validity (and finding infringement) of U. S. Letters Patent, 534,543, granted February 19, 1895, to Emile Berliner, for the "Gramophone." The opinion in the Circuit Court is reported in 140 Fed. 860, *per curiam.*

In affirming this decree we do not find it necessary to add anything to the careful and exhaustive discussion of the issues which will be found in Judge Hazel's opinion, with one single exception. In disposing of the defence of prior public use based upon the lecture and exhibition before the Franklin Institute, the Circuit Court apparently relied mainly upon the proposi-

tion that what took place there was not a public use, but rather an experimental one. Without discussing the questions thus raised or expressing any definite opinion either way, we prefer to dispose of the alleged prior public use by means of the application of Berliner which was filed six months prior to the Franklin Institute lecture, and which eventuated in Patent 564,586, issued subsequent to the patent in suit. The specifications in that application (for 564,586) were full enough to warrant the making of the claims here in controversy (five and thirty-five) at any time the application might have been amended by adding such claims, and in our opinion it is immaterial that instead of thus amending it, he took the broader claims on another application filed while the first was pending. The second may fairly be considered a continuation of the first, and thus Berliner's application antedates the public use, and the facts will not sustain the contention that he abandoned his invention here in suit.

The decree is affirmed.

Reported 146 Fed. Rep., p. 534.

UNITED STATES CIRCUIT COURT, SOUTHERN DISTRICT OF NEW YORK.

Victor Talking Machine Company, et al.,

v.

Talk-O-Phone Company.

The Same

v.

Leeds & Catlin Company.

ON MOTION FOR PRELIMINARY INJUNCTIONS.

TOWNSEND, *C. J.*:

The bills allege infringement of claims five and thirty-five of the Berliner Patent No. 534,543. The Circuit Court for the Southern District of New York in the suit of this complainant against the American Graphophone Company, after an exhaustive discussion of the issues presented sustained said claims and its decree was affirmed by the Circuit Court of Appeals on March 1, 1906, after elaborate argument by able counsel and upon voluminous briefs in which apparently every material defence was presented and discussed.

The case on this motion is presented by some five hundrd pages of affidavits and briefs: "Defendants' Exhibits Letters Patent" is a book of some 135 pages.

It appears that the machines of these defendants are practically identical with those found to infringe in the former suit. These defendants, however, have set up twelve defences claimed either to consist of new matter not before the Court on the former hearing, or to relate to matters, which while in the record at the former hearing were not considered or discussed. The Court is urged to dispose of these questions at the earliest possible moment in view of the great financial interest involved of the advertisements and circulars issued by the respective parties relating to the patent in suit and the machines claimed to infringe, and of the serious damage involved whether a preliminary injunction be granted or denied.

The new defences are founded *inter alia* on the contentions that the patent in suit has expired by reason of the expiration of prior Berliner German, French and English patents and a Berliner-Suess Canadian patent; by reason of Berliner's abandonment of his invention in view of said Berliner-Suess patent; that Berliner was anticipated by an Edison patent; that in the former suit the Berliner patent was not fairly in controversy; that complainant has been guilty of laches, and that defendants do not infringe in view of the prior art and especially of certain prior Berliner patents.

The first and second defences rest upon prior Berliner German Patent No. 53,622 and French Patent No. 207,090. It is claimed that the Berliner patent in suit covers improvements in details of construction upon the Gramophone described and claimed in earlier patents, because his broad invention had been disclosed therein and especially in 372,786 not before the Court in the original suit, and that those details were covered by said prior foreign patents; that the inventions in suit are identical with those of the foreign patents, and

that as they expired prior to the commencement of this suit, the patent in suit expired at the same time under the settled rule.

Bate Refrig. Co. *v.* Sulzberger, 157 U. S. I.;
Sieman *v.* Sellers, 123 U. S. 276.

It is claimed that the language of the specification of the patent in suit supports this view where the patentee says that "one feature of my invention has reference to the method of recording sound," &c., and "the other features of my invention have reference to the construction of the details of both the recorder and the reproducer of the Gramophone," and that while he illustrated his reproducing apparatus as a whole he does not state that it is his invention.

It is claimed further that unless the claims in suit are limited to certain improvements in details they are anticipated by Edison & Suess.

It is argued that the patent in suit expired prior to the commencement of this suit by reason of the expiration of said prior Berliner German and French patents. The drawings of the German patent are substantially identical with Figures 6 and 7 of the patent in suit, and the specifications describe and the claims cover these constructions. The same is true, (barring the claims which are immaterial) of said French patent.

The German patent being a patent of addition to prior Patent No. 45,048, expired with the expiration thereof on November 7, 1902. The French patent expired July 19, 1905.

The French patent and the claims of the German patent cover improvements in details of the construction of Berliner's recorder and reproducer.

It is claimed by complainant that these details differ in construction and operation from those shown

in the patent in suit and covered by claims not in issue, but this question can only be determined by expert testimony, and this point does not appear to be material in the determination of the issue herein.

The issues here presented, assuming the details to be substantially identical, is whether the prior patenting in a foreign country of a minor part of a broad or basic invention, such as that covered by the claims in suit, so effects the whole that the expiration of the foreign patent terminates the whole of a United States patent which includes both the minor parts and the broad main invention. The Circuit Court and the Circuit Court of Appeals in the original suit held that the claims in suit covered the broad invention.

The claims in sujt are as follows:

> "5. The method of reproducing sounds from a record of the same which consists in vibrating a stylus and propelling the same along the record by and in accordance with the said record substantially as described.
>
> "35. In a sound reproducing apparatus consisting of a traveling tablet having a sound record formed thereon and a reproducing stylus shaped for engagement with said record and free to be vibrated and propelled by the same, substantially as described."

The statutes provided as follows:

> "Sec. 4887. No person shall be debarred from receiving a patent for his invention or discovery, nor shall any patent be declared invalid, by reason of its having been first patented or caused to be patented in a foreign country, unless the same has been introduced into public use in the United States for more than two years prior to the application. But every patent granted for an invention which has been previously patented in a foreign country shall be so limited as to expire at the

same time with the foreign patent, or if there be more than one, at the same time with the one having the shortest term, and in no case shall it be in force more than seventeen years."

The test in each case under the statutes, is whether the inventions are identical, as is said by the Supreme Court in Commercial Mfg. Co. *v.* Fairbanks Co., 135 U. S. 176-194.

> "A fair test of the question as to whether the American patent is anticipated by the foreign patents, or is included in them, we think would be, were a person in this country, after the issue of the present American patent, to commence the manufacture of oleomargarine by the precise process described in the Bavarian or Austrian patents, supposing that process had not been patented abroad, would the Courts refuse an injunction to restrain the use of the process on the ground that it infringed that covered by the American patent? We can hardly deem it possible that any intelligent Court would deny an injunction if applied for under such circumstances; and we think this fairly illustrates the relation of the foreign to the American patent."

The cases cited do not satisfactorily settle this question or at most do not seem to support defendants' contention. Thus in Siemans *v.* Sellers, 123 U. S. 276, the Supreme Court held that the American patent expired with the foreign patent, saying that "the principal invention is in both, and if the American patent contains improvements this fact cannot save the patent from the operation of the law which is invoked."

In Western Electric Co. *v.* Citizens' Tel. Co., 106 Fed. 215, the Court said as follows:

> "But what is more directly to the point, the essence of the patent in suit contained in the first claim thereof, namely, the cutting out of the an-

> nunciator from the circuit employed for conversation, is embodied in the description of the invention in the foreign patents. The construction given in the specification necessarily involves it. The case is, therefore, brought under the operation of the rule laid down in Siemans, Adm'r. *v.* Sellers, 123 U. S. 276, 8 Sup. Ct. 117, 31 L. Ed. 153, even though it be conceded that there are differences in some details between the foreign and the home patents upon which independent claims might be based."

I fail to find in the numerous cases cited by counsel any authority for the proposition advanced by defendant that if any article made according to the description of the prior foreign patent would infringe any claim of the American patent no matter how insignificant, then the two patents are for the same invention, and the American patent expires *in toto* with the prior foreign patent. In fact, the interpretation placed by the Courts upon the decision of the Supreme Court in Siemans *v.* Sellers, *supra*, seems to be that the test is whether the principal invention of the domestic patent is found in the prior foreign patent.

I think from such brief examination as I have been able to give the authorities cited that the rule contended for by the defendant does not apply to cases where the foreign patents which have expired do not cover the broad claims for the basic invention.

It is next contended that the patent in suit expired at the same time with certain other Berliner German and French patents and an English patent, because these patents cover the invention of Berliner's United States Patent No. 564,586. But an examination of the drawings of the prior British patent shows that there is omitted therefrom the Figure 10 of the United States Patent No. 564,586, which was the only figure illustrating the form of device covered by the claims here in suit.

There is nothing either in the specifications or drawings of the said British patent which describes, illustrates or shows the method or apparatus of the claims here in suit. These considerations apply equally to said earlier German and French patents.

The fourth, fifth and sixth defences are founded upon a Canadian patent (No. 41,901) to Berliner as assignee of Suess, upon which defendant lays great stress. This patent discloses and broadly claims the invention covered by the claims here in suit. It is contended that thereby Berliner admitted that Suess was the inventor of the reproducing apparatus in suit; that by Berliner's application as assignee of Suess he abanboned the broad claims in suit, and that as the said Canadian patent covered said broad invention and expired in 1899, the patent in suit expired with it.

The evidence introduced in the original suit showed and the Court found on the Suess patent 427,279, that Suess was merely an improver of a particular form of swinging arm device and some of the language used in the specifications of this Suess Canadian patent, which however, was not before the Court, in the original suit, seems to indicate that its structure is merely an improvement on the broad Berliner invention, and Berliner himself afterwards applied for and obtained a Canadian patent for the broad invention covered by the claims here in suit.

But the Canadian patent in terms describes and claims the broad generic invention of Berliner covered by the claims here in suit, as will be seen from the following claims:

> "5. In an apparatus for reproducing sounds from a record tablet, the combination with a reproducer mechanism consisting of a sound conveying tube and a diaphragm and stylus mounted at one end of the tube, of a freely swinging supporting frame for the said reproducer mechanism, substantially as described.

"7. In an apparatus for reproducing sounds from a record tablet, the combination with a reproducer mechanism consisting of a sound conveyor, and a diaphragm and stylus mounted at one end thereof of a supporting frame for the said reproducer, loosely pivoted to swing freely both laterally and vertically, substantially as described.

"11. In an apparatus for reproducing sounds from a rotating record tablet, a reproducing stylus mounted to have a free movement over the surface of the record tablet, substantially as described."

I think, therefore, that if this patent expired as claimed in 1899 the patent in suit expired at the same time, upon the authority of the decisions cited above.

It is contended by complainant, however, that the Canadian patent did not then expire because it was granted for a term of eighteen years from its date, namely, from February 11, 1893. The grant of the patent is for "The period of eighteen years from the date * * * subject to the conditions in the Acts" of Canada. The patent grant further provides as follows:

"The partial fee required for the term of six years having been paid to the Commissioner of Patents, this patent shall cease at the end of six years from date unless at or before the expiration of the said term the holder thereof pay the fee required for the further term or terms as provided by law."

The rule in such cases as I understand it is that the duration of the United States patent is limited by the duration of the legal term of the foreign patent and that it is not limited by any lapse or forfeiture of any portion of said term by means of any condition subsequent.

Pohl *v.* Brewing Co., 134 U. S. 385.

In Bate Refrig Co. *v.* Sulzberger, 157 U. S. 508, the Supreme Court says as follows:

> "But the American patent will be granted upon the conditions that, if you obtain the foreign patent first, your invention shall be free to the American people whenever, by reason of the expiration of the foreign patent, it becomes free to the people abroad."

In Bonsack Mach. Co. *v.* Smith, 70 F. R. 383, the Court construing the decisions held that the question in every case was when does the foreign patent expire looking to its language when issued. Applying this test here I conclude with some hesitation that as the term fixed in the grant was for eighteen years, at the time when the United States patent in suit was issued, the latter does not lapse at the end of six years because of the failure of the patentee after the United States patent had issued to pay the fee for a further term of six years. This conclusion seems to accord with that reached by the Circuit Court of Appeals for this Circuit in Welsbach *v.* Apollo, 96 F. R. 332. In any event, for reasons hereinafter stated, I have concluded to resolve the doubt raised on this point in favor of the complainant.

The defence founded on the prior Edison patent will not be discussed because said patent was before the Court in the original suit. The contention that by reason of a certain contract between the parties "the prior suit was not * * * a suit in which the Berliner patent in suit * * * was fairly in controversy" is not deserving of notice. The contract and the relations of the parties were fully before the Court and the record and briefs in said case are a sufficient answer to any such contention.

The other defences of laches and non-infringement need not be considered.

I have given all of my time available during the past ten days to the examination of the various questions presented on this motion and have reached the conclusion that, except as to the Suess Canadian Patent No. 41,901, the defendants have failed to introduce any new matter which would in my judgment have lead the Courts to reach a different conclusion if it had been before them in the original suit. But even if I am mistaken in this view, and if the expiration of the Suess Canadian patent is a complete defence or if a decision of the questions raised as to the character and scope of the various patents now introduced for the first time should be postponed until final hearing, yet I am constrained to grant the injunction in order to permit an appeal and a determination of the questions at the earliest possible moment.

The motion for a preliminary injunction is granted with leave to defendants to move for a stay pending the decision of these questions by the Circuit Court of Appeals.

The oral opinion of the U.S. Court of Appeals in this case is printed in the Petition for Writ of Certiorari in this Injunction Case, at page 41.

Reported 150 Fed. Rep., p. 147.

UNITED STATES CIRCUIT COURT, SOUTHERN DISTRICT OF NEW YORK.

Victor Talking Machine Company, et al.,
Complainants,

v.

Leeds & Catlin Company,
Defendant.

LACOMBE, *C. J.*:

Aside from any other questions arising upon this motion as to disobedience of injunction order I am entirely satisfied from the proofs that defendants, not only in the instance set forth in complainant's moving papers, but in very many other instances have manufactured and sold the records of claim thirty-five with the intent that they should be used in combination with the other elements of that claim in machines other than "Mechanical-feed." Indeed, it is difficult to escape the conviction that the larger part of defendants' sales were contrived by them to enable the owners of reproducers purchased from complainant or its licensees to produce such musical pieces as such owners might desire to hear, through the co-operation in combination with such reproducers of records made by defendant instead of records made by complainant. No effort to restrict the use to which defendant's discs should be put by notice on their face or otherwise was made until after motion, and the affidavits are not as satisfying as they might be that such notice has since been affixed; and such notice might fairly go further and advise the purchasers that to use it on one of complainant's ma-

chines would make the user an infringer. This seems to be a case of contributory infringement—an entirely voluntary and intentional one, not in any wise excused by the circumstances that complainant had theretofore sold reproducers combined with other records to such owners. Am. Graph. Co. *v.* Leeds, 87 F. R. 873. Nor is the substitution of these new records, bought more frequently in order to increase the repertory of tunes than as substitutes for worn-out discs and wholly unlike the toilet paper in Morgan Envelope case (which was destroyed by a single use) in any legitimate sense "repairs." See Davis Electrical Works *v.* El. Light Co., 60 F. R. 276. Nor is the advice of counsel a sufficient excuse, although where it has been honestly relied upon a heavy penalty will not usually be imposed, but only a sum sufficient to reimburse the moving party and act as a deterrent from future infringing actions.

Defendant is found in contempt and fine imposed of $1000, one-half to United States, one-half to complainant. Collection will be suspended pending appeal.

January 5, 1907.

Reported 154 Fed. Rep., p. 58.

UNITED STATES CIRCUIT COURT OF APPEALS FOR THE SECOND CIRCUIT.

The Leeds N *Catlin Company,*
Plaintiff in Error,

v.

The Victor Talking Machine Company and the United States Gramophone Company,
Defendants in Error.

ON WRIT OF ERROR TO THE CIRCUIT COURT OF THE UNITED STATES FOR THE SOUTHERN DISTRICT OF NEW YORK.

LOUIS HICKS, ESQ., for plaintiff in error (deft. below);

HORACE PETTIT, ESQ., for defendants in error.

HOUGH, *D. J.:*

Defendants in error having brought suit against the plaintiff in error alleging infringement of the Berliner gramophone patent (No. 534,543), procured an injunction restraining the manufacture, use or sale of sound reproducing apparatus or devices embodying the subject matter specified in claims five and thirty-five of said patent, and also the use or employment in any way of the method set forth in claim five thereof (reported 146 Fed. Rep. 534, affirmed by this Court, 148 Fed. Rep., 1022). The claims protected by such adjudications are

"a sound reproducing apparatus consisting of

> (1) a traveling tablet having a sound record formed thereon and (2) a reproducing stylus shaped for engagement with said record and free to be vibrated and propelled by the same, substantially as described." (No. 35.)

and the

> "Method of reproducing sounds from a record of the same consisting in (1) vibrating a stylus and (2) propelling the same along the record by and in accordance with the said record substantially as described." (No. 5.)

(the "record" being identical with the "traveling tablet" above mentioned.)

In other words the invention under consideration is the Victor Talking Machine, and the feature thereof here important is that its reproduction of sound depends upon the record groove cut in the traveling tablet (or disc record) *compelling* the movement of the stylus across the face of the record by the horizontal revolution of the record itself.

The reproducer of which the stylus is an integral part is covered by claims of the Berliner patent not now in question, but of the combination protected by claims five and thirty-five thereof the stylus alone (or rather the machine of which it forms a part) is itself patented, while the traveling tablet sound record or disc record, is an unpatented article.

The Leeds & Catlin Company is a manufacturer of disc records, and since the decision of this Court above referred to asserts that it has become a dealer in another talking machine known as the "feed-device machine," which for the purposes of this cause may be regarded as not infringing any of the rights of the Victor Company under the Berliner patent. The Leeds & Catlin disc records are equally suitable for the feed-device machine and for that of the defendant in error.

Plaintiff in error was found to have sold disc records forming an essenial part of the sound reproducing apparatus and devices covered by the above mentioned claims of the Berliner patent, and was fined for such violation of injunction. This writ of error is to review the order imposing said fine.

On ample evidence the Court below found; that most of the sales of Leeds & Catlin records were knowingly made by the plaintiff in error to enable the owners of Victor Talking machines to reproduce such musical pieces as they wished, by the combination of the Leeds & Catlin record with said machines that the Leeds & Catlin Company made no effort to restrict the use to which their records might be put until after motion to punish for contempt had been made; that the only effort at such restrictions ever made was to insert upon the face of the records a notice to the effect that such record was intended and sold for use with the "feed-device machine;" that the records sold by plaintiff in error were far more frequently bought to increase the repertoire of the purchaser's Victor machine than to replace worn-out or broken records.

In our opinion it is also established by the evidence that the "feed-device machine" above referred to, was not at or before the time of beginning this proceeding a practically or commercially known reproducer of musical or spoken sound, whereas the Victor machine, embodying the claims of the Berliner patent here under consideration, was at such times widely known and generally used, and the plaintiff in error knew, and sold its records with the knowledge, that if its output was to be used at all by the public, it would be used with the Victor machine, and in the combination protected by the claims of the Berliner patent above referred to.

Upon these facts it is clear that the Leeds & Catlin Company have made and sold a single element of the

claims of the Berliner patent, with the intent that it should be united to the other element and complete the combination—and this is infringement (Heaton Peninsular, etc. Co. *v.* Eureka Specialty Co., 77 F. R. at 297; adopted by this Court, Cortelyou *v.* Lowe, 111 F. R. 1005).

The facts above recited are scarcely controverted, nor is it denied that the above inference should ordinarily be drawn; but plaintiff in error seeks to avoid that result by asserting that the records under consideration are but temporary perishable and unpatented parts of the patented combination; and therefore under Morgan Envelope Co. *v.* Albany Paper Co., 152 U. S., 425, free to be manufactured and sold by anyone.

This contention is not supported by the evidence. Disc records are fragile, i. e., brittle and easily broken; but are not perishable, i. e., subject to decay by their inherent qualities or consumed by few uses or a single one. Neither are they temporary, i. e., not intended to endure; on the contrary we find them capable of remaining usful for an indefinite period, and believe that they usually last as long as does the vogue of the sounds they record.

A rifle bullet, lost by a single discharge, is a perishable and temporary part of the combination of rifle and ammunition; and probably a cartridge shell, though capable of re-loading and use several times, may also be so regarded; but the missle of a toy gun, picked up and used again and again on its original form, is in no proper sense of the words either "perishable" or "temporary," though it may by repeated use wear out sooner than does the gun with which it is repeatedly combined.

Again, it is urged inasmuch as disc records are unpatented articles of commerce, which may be used upon the feed-device machine or lawfully exported to foreign countries, that no infringement can be alleged against the maker and seller thereof, because his prod-

uct may be or is in fact used by purchasers as one element of a patented combination. This argument disregards the facts established herein. It is true that the doctrine of contributory infringement has never been applied to a case where the thing contributed is one of general use, or suitable to a variety of other uses; especially where there is no definite purpose that the thing sold shall be employed with others to infringe a patent right (Rumford Chemical Works *v.* Hygienic Chemical Co., 148, F. R. at 866, and cases cited). But this plaintiff in error is shown to have manufactured and sold records for the express purpose of supplying the users of Victor machines; nor are such records staple articles of commerce (Cortelyou *v.* Johnson, 145 F. R., at 935); on the contrary, they can not be practically used within the United States except with the Victor reproducer; for we regard the feed-device machine either as a curiosity or a pretence, while the foreign trade of the plaintiff in error is not interferred with by the injunction nor affected by the order under review.

It is further contended that those who purchase the patented combination in question without restriction, have lawful right to provide themselves with unpatented records made by any person whatever—by way of replacement and repair. We perceive no substantial difference in the meaning of these words. To return to use something injured or lost, or to substitute for something defaced or destroyed another thing substantially identical, is to repair. The right of general repairing has not been questioned; but what plaintiff in error has done is not to mend or better broken or other records, nor even to furnish new records identical with those originally offered by the Victor Company—but to place upon new discs such other sound records as are thought to command a market, and to induce users of the patented machine not to replace,

but to increase their stock of recorded words and music.

The right of repair is measured by the right of the owner of the patented article, and such owner when doing what is above outlined is no more repairing his machine than is one repairing a stereopticon—by changing the pictures therein to suit the whim of the person gazing through it.

The final contention against the order below, admits that the record actuating the stylus is a vital part of the combination claims of the patent in question, but declares that any purchaser of the patented article may immediately *substitute* for even an essential element therein, any other element which he conceives better suited to his purpose; and, of course, if this be true such preferred elements may be freely manufactured and sold.

We think this contention disposed of by Thomson Houston, etc., Co. *v.* Kelsey, etc., Co., 75 F. R., 1005; for the right of substitution there recognized was specifically restricted so as to refuse "authority to reconstruct or rebuild a combination which has been sold by the complainant"; and whenever a Leeds & Catlin record is placed in a Victor machine the patented combination is instantly reconstructed.

The right of substitution rests upon the right to improve, pointed out by Clifford, J., in Chaffee *v.* Belting Co., 22 How., at p. 223, and is different from the right to repair. But there is here no true substitution, and improvement is scarcely pretended. From a legal standpoint the discs of both parties are identical because the grooving capable of actuating the reproducer is the same; what is substituted is but music or words, and what is improved, either price, or novelty is sound. These are but accidents, and no more important than the color of the disc. The true inquiry is whether the owner of a patented combination, the elements of which are durable, unbroken and in good repair, may buy

from the patentee one specimen of a single element, from an outsider an indefinite number of identical specimens of the same element, and keep and use them all, under cover of the word "substitution"; it further appearing that the element so procured and used is useful and commercially known only in respect of the said combination.

We think this cannot lawfully be done, and affirm the order below.

WALLACE, *Circuit Judge* (dissenting):

In considering the question of infringement, claim five may be laid out of view, as it covers merely the function of the machine or combination of claim thirty-five. It is more than doubtful whether the claim is not void upon its face, but assuming it to be valid, as must be done for present purposes, it is not infringed except by using the combination or machine of claim thirty-five. A sound record is one of the parts enumerated in claim thirty-five. It is however, only a subsidiary part of the machine. Its relation to the machine proper is analogous to that of a sheet of paper in a typewriting machine or the stalks of corn in a corn cutter. It is the thing which is to be operated on by the machine proper. The invention of the claim consisted in substituting a universal joint, or swinging arm, in lieu of a feed-screw device, and thereby producing a new form of reproducing stylus for engaging with the record; and everything else in the machine was old. This clearly appears by the opinion in the suit in which the validity of the patent was established Victor Talking Machine Co. *v.* American Graphophone Co. (140 F. R., 860).

It is not questioned and cannot be, that the plaintiffs in error were at complete liberty to make and sell such sound records as they did, provided they did not sell them to purchasers who had no right to use them in combination with the other devices enumerated in claim thirty-five. They have been adjudged guilty of

contempt because they have sold them, or threatened to sell them, to users of the so-called "Victor" machine which embodies the combination, and who purchased their machines from the Victor Talking Machine Company, the owner of the patent. If these purchasers were at liberty to remove a sound record which originally accompanied the machine, and substitute for it a sound record sold by the plaintiffs in error, they were not infringers, and plainly the plaintiffs in error could not be infringers by assisting the purchasers to do that which they had a right to do. The real question in the case, therefore, is whether the purchasers of the Victor machines infringe the patent by using in their machines the sound records manufactured by the plaintiffs in error.

The purchaser of a patented machine from the owner of the patent acquires the right to do what he may choose with the particular machine, or any of its parts, as freely as he could if it, or none of its parts, had ever been patented. Undoubtedly he cannot, after his machine has practically ceased to exist for any useful purpose, reconstruct it by reparation, nor can he then reconstruct it by disorganizing it and substituting as new parts the dominating and vital features of the patented invention. But no question of this kind is involved in the present controversy. The only question is whether he can discard a part he does not care to use and substitute another. When such a part is not the fundamental invention in the patented machine, I cannot doubt he is at liberty to do so. This was so decided by this Court in the "trolley stand" case (Thomson-Houston Co. v. Kelsey Co., 75 F. R., 1005), and is not an open question in this Court unless it is proposed to reconsider and overrule that decision. He is not under any implied promise to maintain the machine as an entity and may do whatever he chooses with any of its parts, as fully as if there had not been a patent.

Let us consider from a practical standpoint what

any other rule would lead to in a case like the present. The purchaser here has bought with his machine a sound record, or half a dozen sound records, each having the necessary grooves cut in it to enable him to reproduce for his own pleasure a particular piece of music. The record is a fragile thing which is to be inserted into the machine by the user, and must be adjusted accurately to the vibrating parts, and is to be removed when he wants to reproduce a different piece of music. Any slip of the hand will destroy it. Not only is this so, but its sound producing qualities are lost by the contact of the needle which is vibrated in its grooves long before the machine proper is worn out, and generally early in its normal life. Whenever either of these things happens, a machine, which costs at least seventeen dollars, is disabled unless a record like one which has been sold with it at the price of thirty-five cents, and which anybody and everybody has a right to make, may be replaced in the machine in lieu of the useless one. If the owner of the patent stops manufacturing records, or no longer has in the market a record grooved like the one which has been destroyed, what is the purchaser to do if he has not the right to replace a record without the permission of the patent owner? The purchasers of the Victor machine cannot require the Victor Talking Machine Company to supply them with records, and can only procure them from it on such terms as it pleases to exact. If they are not at liberty to procure them elsewhere, the company can dictate how long they are to enjoy the use of their machine.

Such a rule of infringement as is adopted by the majority opinion, not only extends the monopoly of the patent owner to an unprecedented extent, but is subversive of the right of a purchaser of the patented thing to realize its fair measure of usefulness by making necessary reparations or changes by way of improvement.

Reported 158 Fed. Rep., p. 309.

UNITED STATES CIRCUIT COURT, SOUTHERN DISTRICT OF NEW YORK.

Victor Talking Machine Co., et al.,

v.

William H. Hoschke, Individually, &c.

ON MOTION FOR PRELIMINARY INJUNCTION.

HORACE PETTIT, for complainant;

WALDO G. MORSE, for defendant.

HOUGH, *D. J.*:

The patent in suit is No. 534,543, granted to Berliner; and the infringement asserted is of claims five and thirty-five; so frequently before the Courts of this Circuit. (140 Fed. Rep., 860; 145 Fed. Rep., 350; 146 Fed. Rep., 534; 148 Fed. Rep., 1022; 150 Fed. Rep., 147; 154 Fed. Rep., 58.)

The rulings which are the foundation of the decision in Victor Talking Machine Co. *v.* Leeds & Catlin Co. (146 Fed. Rep., 534), and the contempt proceeding following affirmance of that decree, are about to be reviewed in the Supreme Court.

Careful examination of the voluminous record here submitted strengthens the impression formed at hearing, that this is an endeavor to escape the necessary effect of the decisions of the Circuit Court of Appeals above referred to. While recognizing fully the gravity of the questions now awaiting decision in the highest Court, and the novelty in that Court of at least two of

the questions involved, I am not authorized to indulge in speculations of my own regarding them, but am bound to follow and apply the decisions controlling in the Courts of this Circuit.

It is admitted that those Courts have declared the Berliner patent not to have been anticipated nor abandoned, to be patentable and not invalidated by prior use (140 Fed Rep., 861), and not to have expired with the expiration of numerous foreign patents (146 Fed. Rep., 534).

The present assertions are (1) that evidence is now offered for the first time tending to show that the Suess Canadian Patent (No. 41,901) absolutely expired six years from the granting thereof, whereby the patent in suit also expired; and (2) that while this Circuit has decreed the validity of the Berliner patent, it has never been called upon to interpret its scope.

The evidence regarding the Suess patent as a defence is the affidavit of Mr. Walker, of the Canadian bar, declaring that in his opinion the effect of not paying the second partial fee provided for by the Canadian Patent Act is to absolutely terminate the patent at the expiration of six years. It is admitted that this has never been the subject of a decision by the Canadian Courts.

It may well be that this is the universal opinion of the Canadian bar, but it does not meet the ruling of Judge Townsend in 146 Fed. Rep., at 538, who there held "that the duration of the United States Patent is limited by the duration of the *legal term* of the foreign patent and is not limited by any lapse or forfeiture of any portion of said term by means of any condition subsequent." The non-payment of the second partial fee under the Canadian Act is clearly a condition subsequent, and the legal term of a Canadian patent is not six but eighteen years. It may be that such legal term absolutely ends when the second partial fee is not paid,

and that the words "lapse" or "forfeiture" would not be used by Canadian lawyers, and a lease may by its language end for non-payment of rent or other breach of condition; but such termination does not change the original "legal term" either of the patent or the lease. Judge Townsend's declaration of the law is not a construction of the Canadian Patent Act or a declaration of what the Canadian law on that subject may be, but a statement of the law of this country as effected by a Canadian statute, and there is no intimation in his ruling that the result would have been different had the Canadian practice appeared to be as it is now declared to be by the affidavit of Mr. Walker.

As to defendant's second contention, I do not think it true that the Courts of this Circuit have not interpreted the scope of the Berliner patent. Judge Hazel declared that "the lateral undulations in (complainant's) record automatically guide or propel the stylus and diaphragm in its course over the disc, from its outer circumference toward the center, and the stylus travels in an apparently direct radial path while at the same instant of time it is pulsated or incited by the sound waves." This is a description of the method of operation of complainant's talking machine.

The principal of operation of complainant's machine as declared in the same decision (140 Fed. Rep., 863), is the "lateral vibration of the stylus point and the propelling of the same over the surface of the record without mechanical assistance and through the means of the groove alone"; such is said to be the primary object of the inventor; and again (p. 864 of 140 Fed.) it is stated that the "principle of Berliner's invention rests upon the practicability of propelling the stylus in the groove across the surface of the record without a feed screw or other mechanism."

It has thus been definitely held that Berliner's invention covers the reproduction of sound by means of

a vibrating reproducing stylus, shaped for engagement with the laterally undulated groove of a sound record, and free to be vibrated and propelled by the revolving record itself, without the assistance or guidance of a feed screw or other mechanism.

The stylus of the patent being engaged with the spirally shaped groove of a horizontally revolving record, is compelled by such revolution to move in a radial path toward the center of disc and spiral, while its contemporaneous contact with the sides of the disc groove, causes a pulsation of the diaphragm and reproduction of the sound recorded by indentations or undulations of the groove walls.

Defendant's machine in every material feature is complainant's, and so is the disc obtained from defendant for use with that machine. The only difference between the two machines is that defendant's has within its free arm a spring tending to press the stylus against the inner wall of any groove with which it may be engaged, and causing arm and stylus when disengaged from any groove, to pass the stylus point through the arc of a circle whose radius is the free arm.

This is the distinction upon which defendant relies. That it is not a feed screw or other equivalent mechanism seems to me plain.

If a record be constructed with a groove so wide that it is not possible for an absolutely free stylus to engage both sides of the groove by merely rotating the grooved disc, it is shown, that complainant's machine will not produce articulate sound; while the defendant's will reproduce the same provided that the sound record is entirely upon that side of the groove with which the spring aforesaid compels engagement. And the result is the same if the disc be constructed with a wall formed by lowering the plane of the outer edge of the disc; such wall is in effect the inner side of a groove. In other words, the spring enables a stylus otherwise

free to reproduce articulate or musical sound recorded upon one wall, instead of two.

But it is also true that the spring of defendant's machine is not strong enough, and evidently not intended to be strong enough, to prevent its use with disc records of narrow grooving bearing sound markings or indentations on both sides of the groove, and with such records the presence or absence of the spring in defendant's machine makes no difference, as has been demonstrated in the presence of counsel.

Were defendant selling a machine containing this spring, together with wide grooved or wall records with reproducing indentations only upon the side against which the spring presses the stylus; it may be that no infringement would be found; but when defendant's machine is used in the same way, with the same disc, and produces the same effect by the same means, as does complainant's machine, it is an infringement notwithstanding the spring; and this is what defendant has done according to the proof

It seems clear, therefore, that defendant has infringed complainant's patented combination, and the fact that one element in the combination (i. e., the machine) may be used in combination with articles bearing no resemblance to the other elements of the combination as patented cannot make any difference; this litigation is not concerned with what defendant might do, but what he has done. He might, perhaps, have avoided infringement by varying his combination; so might the defendants in the last case concerning this patent (154 Fed. Rep., p. 58).

An injunction may issue as prayed for.

December 27, 1907.

C. M. HOUGH,
D. J.

65540

TRANSCRIPT OF RECORD.

SUPREME COURT OF THE UNITED STATES.

OCTOBER TERM, 1907.

No. 81.

LEEDS AND CATLIN COMPANY, PETITIONER,

vs.

VICTOR TALKING MACHINE COMPANY AND UNITED STATES GRAPHOPHONE COMPANY.

MINNESOTA STATE LIBRARY

ON WRIT OF CERTIORARI TO THE UNITED STATES CIRCUIT COURT OF APPEALS FOR THE SECOND CIRCUIT.

PETITION FOR CERTIORARI FILED MAY 11, 1907.
CERTIORARI AND RETURN FILED JUNE 17, 1907.

(20,708.)

(20,708.)

SUPREME COURT OF THE UNITED STATES.

OCTOBER TERM, 1907.

No. 308.

LEEDS AND CATLIN COMPANY, PETITIONER,

vs.

VICTOR TALKING MACHINE COMPANY AND UNITED STATES GRAMOPHONE COMPANY.

ON WRIT OF CERTIORARI TO THE UNITED STATES CIRCUIT COURT OF APPEALS FOR THE SECOND CIRCUIT.

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a United States Circuit Court of Appeals for the Second Circuit.

THE LEEDS & CATLIN COMPANY, Plaintiff in Error (Defendant Below),

vs.

THE VICTOR TALKING MACHINE COMPANY and THE UNITED STATES GRAMOPHONE COMPANY, Defendants in Error (Complainants Below).

Transcript of Record.

Error to the Circuit Court of the United States for the Southern District of New York.

Printed under the Direction of the Clerk.

1 Circuit Court of the United States, Southern District of New York. In Equity.

No. 8797.

VICTOR TALKING MACHINE COMPANY and UNITED STATES GRAMOPHONE COMPANY, Complainants,

vs.

LEEDS & CATLIN COMPANY, Defendant.

Petition for Writ of Error.

And now comes Leeds & Catlin Company, conceiving itself aggrieved by the judgment or decree entered herein on the 11th day of January, 1907, adjudging said Leeds & Catlin Company to be in contempt of court for having violated the order and writ of injunction issued herein, and fining said Leeds & Catlin Company in the sum of one thousand dollars ($1,000), one-half to the United States and one-half to complainants, to be paid to the Clerk of this Court, and hereby prays that a writ of error be allowed from said judgment or decree returnable to the United States Circuit Court of Appeals for the Second Circuit, and that a transcript of the records and proceedings and papers upon which said judgment or decree was made, duly authenticated, may be sent to the said United States Circuit Court of Appeals for the Second Circuit.

2 And defendant presents herewith its assignment of errors.

Dated New York, January 26, 1907.

LOUIS HICKS,
Solicitor for Defendant, 71 Nassau Street, New York.

And now, to wit, on this 26th day of January, 1907, it is ordered that the above writ of error be allowed as prayed for.

E. H. LACOMBE,
U. S. Circuit Judge.

Service of a copy of above petition and order on this 31st day of January, 1907, is hereby admitted.

STIMSON & WILLIAMS,
Solicitors for Complainants.

Filed January 31, 1907.

Writ of Error.

UNITED STATES OF AMERICA, *ss:*

The President of the United States of America to the judges of the circuit court of the United States for the southern district of New York, Greeting:

Because in the record and proceedings, as also in the rendition of the judgment of a plea which is in the said Circuit Court before you, or some of you, between Victor Talking Machine Company and United States Gramophone Company, complainants and defendants in error, and Leeds & Catlin Company, defendant and plaintiff in error, a manifest error hath happened to the great damage of
3 said Leeds & Catlin Company, as is said and appears by its complaint; we, being willing that such error, if any hath been, should be duly corrected and full and speedy justice done to the parties aforesaid in this behalf, do command you, if judgment be therein given, that then, under your seal, distinctly and openly, you send the record and proceedings aforesaid, with all things concerning the same, to the Judges of the United States Circuit Court of Appeals for the Second Circuit, at the court rooms of said court in the Post Office Building, in the City of New York, together with this writ, so that you have the same at the said place before the Judges aforesaid, on the 23d day of February, 1907, that the record and proceedings aforesaid being inspected, the said Judges of the United States Circuit Court of Appeals for the Second Circuit may cause further to be done therein to correct that error, what of right according to the law and custom of the United States ought to be done.

Witness, the Honorable Melville W. Fuller, Chief Justice of the Supreme Court of the United States, this 26th day of January, in the year of our Lord one thousand nine hundred and seven, and of the Independence of the United States the one hundred and thirty-first.

JOHN A. SHIELDS,
Clerk of the Circuit Court of the United States of America for the Southern District of New York, in the Second Circuit.

The foregoing writ is hereby allowed.

E. HENRY LACOMBE,
U. S. Circuit Judge.

Service of a copy of the foregoing writ of error is hereby admitted this 31st day of January, 1907.

STIMSON & WILLIAMS,
Solicitors for Complainants.

Filed January —, 1907.

4 UNITED STATES OF AMERICA, *Southern District of New York, ss:*

I, John A. Shields, Clerk of the Circuit Court of the United States of America for the Southern District of New York, in the Second Circuit, by virtue of the foregoing writ of error, and in obedience thereto, do hereby certify that the following pages, numbered from five to one hundred and thirty-four, inclusive, contain a true and complete transcript of the record and proceedings had in said Court in the cause of Leeds & Catlin Company, plaintiff in error, against Victor Talking Machine Company and United States Gramophone Company, defendants in error, as the same remain of record and on file in said office.

In testimony whereof, I have caused the seal of the said Court to be hereunto affixed, at the City of New York, in the Southern District of New York, in the Second Circuit, this eighth day of February, in the year of our Lord one thousand nine hundred and seven, and of the Independence of the United States the one hundred and thirty-first.

[SEAL.] JOHN A. SHIELDS, *Clerk.*

(Endorsed:)—U. S. Circuit Court, Southern Dist. of New York.—Victor Talking Machine Co. and United States Gramophone Co., Complainants, against Leeds & Catlin Company, Defendant. (Original.)—Writ of Error.—Louis Hicks, Solicitor for Defendant, 71 Nassau Street New York, N. Y.—U. S. Circuit Court, Southern District of New York.—Filed Jan. 31, 1907.—John A. Shields, Clerk.

5 Circuit Court of the United States, Southern District of New York. In Equity.

No. 8797.

VICTOR TALKING MACHINE COMPANY and UNITED STATES GRAMOPHONE COMPANY, Complainants,

vs.

LEEDS & CATLIN COMPANY, Defendant.

To Leeds & Catlin Company, its directors, associates, officers, attorneys, solicitors, clerks, servants, agents, workmen, and employees:

Please take notice that a Rule has been issued against you, and each of you, to show cause why an attachment should not be issued against you and each of you, for contempt of Court, by reason of violating and disobeying the preliminary injunction in this cause, issued out of and by authority of this Court, on the twenty-seventh day of October, 1906, and that the said Rule is returnable Friday, the 23d day of November, 1906, at two o'clock in the afternoon, in the Circuit Court of the United States for the Southern District of New York, in the Post Office Building, in the Borough of Manhattan, City, County and State of New York.

That upon the hearing of said Rule, the complainants herein will read and rely upon, among other things, the papers, copies of which are herewith served upon you, and the exhibits referred to
6 therein, the originals of said papers, and the said exhibits, being on file in the office of the Clerk of the Circuit Court of the United States for the Southern District of New York, in the Post Office Building, Borough of Manhattan, City, County and State of New York.

HORACE PETTIT,
Of Counsel for Complainants.

November 19, 1906.

Circuit Court of the United States, Southern District of New York.
In Equity.

No. 8797.

VICTOR TALKING MACHINE COMPANY and UNITED STATES GRAMOPHONE COMPANY, Complainants,
vs.
LEEDS & CATLIN COMPANY, Defendant.

And now, to wit, November 19, 1906, upon reading the petition of the Victor Talking Machine Company and the United States Gramophone Company, the above-named complainants, and the affidavits and certified copy of the preliminary injunction, and the return thereon, which accompany said petition, it is

Ordered that a rule issue against the above named Leeds & Catlin Company, its directors, associates, officers, attorneys, solicitors, clerks, servants, agents, workmen and employees, to show cause why an attachment should not issue against it and each of them for
7 contempt of Court by reason of violating and disobeying the hereinafter mentioned preliminary injunction of this court, issued out of and by authority of this Court on the twenty-seventh day of October, 1906; the said rule returnable on the 23d day of November, 1906, at the courtroom of the United States Circuit Court for the Southern District of New York, in the Post Office Building, Borough of Manhattan, City, County and State of New York.

And that any affidavits to be used in opposing said attachment for contempt be served on complainants' solicitors not later than two o'clock p. m., November 22, 1906.

(Sgd.) E. HENRY LACOMBE, *U. S. C. J.*

Circuit Court of the United States, Southern District of New York.
In Equity.

No. 8797.

VICTOR TALKING MACHINE COMPANY and UNITED STATES GRAMOPHONE COMPANY, Complainants,
vs.
LEEDS & CATLIN COMPANY, Defendants.

The petition for order to show cause why the defendant herein, Leeds & Catlin Company, its directors, associates, officers, attorneys, solicitors, clerks, servants, agents, workmen and employees, should not be attached for contempt of Court for violating
8 and disobeying the preliminary injunction issued out of and by the authority of this Court.

To the Honorable the Judges of the United States Circuit Court of the Southern District of New York:

The petition of the complainants, the Victor Talking Machine Company and the United States Gramophone Company, respectfully represents unto this Honorable Court:

First. That your petitioners are the complainants in the above entitled suit which was brought against Leeds & Catlin Company for infringement of Letters Patent to Emile Berliner, No. 534,543, dated February 19, 1895, for Gramophone, and for an injunction and an accounting of damages and profits.

Second. That on the 13th day of April, 1906, a motion by the complainants for a preliminary injunction was heard by this Honorable Court, and on the 26th day of April, 1906, a decision was rendered by his Honor, Judge William K. Townsend, granting a preliminary injunction against the defendant, the Leeds & Catlin Company, for infringement of said Letters Patent, as prayed for in the bill of complaint.

Third. That on the 2nd day of May, 1906, a decree was entered in accordance with the aforesaid decision.

Fourth. On the 2nd day of May, 1906, upon the motion of the defendant for a stay of the preliminary injunction, pending an appeal to the Circuit Court of Appeals, leave to make which motion was contained in said decision of Judge Townsend, so filed on April 26th, 1906, the said preliminary injunction was stayed pending the decision of the Circuit Court of Appeals, upon the condition
9 that the defendant enter security in the sum of ten thousand dollars ($10,000), to indemnify the complainants for damages and profits due to infringement accruing during the period of said stay, which security was entered by the defendant.

Fifth. That thereafter the defendant perfected an appeal to the United States Circuit Court of Appeals for the Second Circuit, which appeal was argued on October 11th and 12th, 1906, before the Honorable Judges Wallace, Lacombe and Coxe, and that on October 12,

1906, the decree of the Circuit Court of the United States for the Southern District of New York granting a preliminary injunction was affirmed orally by the Honorable Judge Wallace, on behalf of the Court.

Sixth. That on October 23d, 1906, the mandate issued out of the United States Circuit Court of Appeals for the Second Circuit, affirming the said decree of the United States Circuit Court for the Southern District of New York, so entered on May 2, 1906, which mandate was filed in the United States Circuit Court for the Southern District of New York on October 27th, 1906.

Seventh. That on the same day, to wit, October 27, 1906, a decree in accordance with said mandate was signed and filed, in which it was ordered

"That a writ of preliminary injunction issue in this cause restraining the defendant, the Leeds & Catlin Company, its associates, servants, clerks, agents and workmen, and each and every one of them, from manufacturing, using or selling, until further order of this Court, sound reproducing apparatus or devices embodying the subject matter of Claim 35, of the Letters Patent in suit, which claim reads as follows, namely:

'35. In a sound reproducing apparatus consisting of a traveling tablet having a sound record formed thereon and a reproducing stylus shaped for engagement with said record and free to be vibrated and propelled by the same, substantially as described.'

And from manufacturing, using or selling, or in any way disposing of apparatus or devices which embody the method specified in Claim 5 of Letters Patent in suit, which claim reads as follows, namely:

'5. The method of reproducing sounds from a record of the same which consists in vibrating a stylus and propelling the same along the record by and in accordance with the said record, substantially as described.'

And from using or employing in any way the method specified in said Claim 5."

Eighth. That on the same day, to wit, October 27, 1906, a preliminary injunction was issued out of this Court, enjoining and commanding the above-named defendant, Leeds & Catlin Company, its directors, associates, officers, attorneys, solicitors, clerks, servants, agents, workmen and employees, and each and every one of them from manufacturing, using or selling, until further order of this Court, sound reproducing apparatus or devices embodying the subject matter of Claim 35 of the Letters patent in suit, which claim reads as follows, namely:

"35. In a sound reproducing apparatus consisting of a traveling tablet having a sound record formed thereon and a reproducing stylus shaped for engagement with said record and free to be vibrated and propelled by the same, substantially as described."

And from manufacturing, using or selling, or in any way disposing of apparatus or devices which embody the method specified in Claim 5 of Letters Patent in suit, which claim reads as follows, namely:

11 "5. The method of reproducing sounds from a record of the same which consists in vibrating a stylus and propelling the same along the record by and in accordance with the said record, substantially as described."

And from using or employing in any way the method specified in said Claim 5.

A certified copy of said preliminary injunction and the return thereon is hereto annexed.

Ninth. That said preliminary injunction was served by William Henkel, United States Marshal for the Southern District of New York, on the 29th day of October, 1906, on the said Leeds & Catlin Company, the defendant, by giving to Edward F. Leeds, as President of said Leeds & Catlin Company, a true copy of said preliminary injunction on the 29th day of October, 1906, and making the contents thereof known to the said Edward F. Leeds, as will appear by the certified copy of the preliminary injunction and return thereon hereto annexed.

Tenth. Your petitioners further show that in violation and in utter disregard of the aforesaid preliminary injunction, the defendant herein, The Leeds & Catlin Company, since the said preliminary injunction was served upon it on the 29th day of October, 1906, has made, used and sold, and has permitted its directors, associates, officers, attorneys, solicitors, clerks, servants, agents, workmen and employees, to make, use and sell, without license of the Victor Talking Machine Company or The United States Gramophone Company, the above named complainants, sound reproducing records forming an essential part of the sound reproducing apparatus and devices forming the subject matter of Claim 35 of the Letters Patent in suit, said records being made and sold to be used in the method specified in Claim 5 of the Letters Patent in suit in infringement of

12 the rights of the complainants herein, as set forth in said bill of complaint, as will more fully appear from the affidavits hereto annexed and from the exhibits referred to in said affidavits.

Said sound reproducing records thus made, sold and used by the defendant being flat disc sound records having an undulatory groove of even depth, spirally provided upon the base of the record disc in all respects the same as the sound reproducing records formerly made, used and sold by the defendant and which the said defendant was enjoined by said preliminary injunction from making, using or selling for sound-reproducing purposes, in accordance with the claims 5 and 35 of said patent in suit.

Eleventh. Your petitioners further show that in utter disregard of the aforesaid preliminary injunction, the defendant herein, the Leeds & Catlin Co., since the said preliminary injunction was served upon it on the 29th day of October, 1906, has made and sold, and has permitted its directors, associates, officers, attorneys, solicitors, clerks, servants, agents, workmen and employees, to make and sell without license of the Victor Talking Machine Co. and the United States Gramophone Co., the above named complainants, the said sound reproducing records for use in carrying out the methods specified in

Claim 5 of said Letters Patent in suit, and made and sold the same to others with the knowledge that the said sound reproducing records were to be used in carrying out the said method of Claim 5 and in the combination of Claim 35, of the Letters Patent in suit, by others, without license from the complainants, and in infringement of the rights of the complainants herein, as set forth in said bill of complaint, as will more fully appear from the affidavits hereto annexed, and from the exhibits referred to in said affidavits.

Twelfth. Wherefore your petitioners pray that this Honorable Court make and order, directed to the said defendant, Leeds &
13 Catlin Company, and its president, Edward F. Leeds, commanding it and him, at a date and place to be therein named, to be and appear before this Honorable Court, and to show cause, if any it or he has, why it and he should not be attached and punished for it and his contempt of the injunction issued out of and by the authority of this Honorable Court, and in support of this petition your petitioners humbly pray that the annexed certified copy of the preliminary injunction and the return thereon, and the affidavits be read and considered.

And your petitioners will ever pray, &c.

(Sgd.) STIMSON & WILLIAMS,
Solicitors for Complainants.

(Sgd.) HORACE PETTIT,
Of Counsel for Complainants.

Philadelphia, Pa., November 15, 1906.

STATE OF PENNSYLVANIA,
City and County of Philadelphia, ss:

On this fifteenth day of November, 1906, personally appeared Albert C. Middleton, who, being duly affirmed, deposes and says, that he is secretary of the Victor Talking Machine Company, one of the complainants herein; that he has read the foregoing petition subscribed by him, and that he knows the contents thereof, and that the same is true of his own knowledge, except as to those matters stated on information and belief, and that as to those matters he believes it to be true.

(Sgd.) ALBERT C. MIDDLETON.

Affirmed and subscribed to before me this fifteenth day of November, 1906.

(Sgd.) JOHN B. RUTHERFORD,
[SEAL.] *Notary Public.*

Commission expires Feb. 27, 1909.

14 The President of the United States to Leeds & Catlin Company, its directors, associates, officers, attorneys, solicitors, clerks, servants, agents, workmen and employees, Greeting:

Whereas, it has been represented to us in our Circuit Court of the United States for the Second Circuit and Southern District of New York, that Letters Patent of the United States were issued upon certain improvements and inventions or discoveries of Emile Berliner, in due form of law, on the 19th day of February, 1895, No. 534,543, for gramophone, and that said Letters Patent were duly assigned to the United States Gramophone Company, and that the Victor Talking Machine Company was duly licensed under said Letters Patent, and that you, the said Leeds & Catlin Company, have infringed the fifth and thirty-fifth claims thereof:

Now, therefore, we strictly command and enjoin you, the said Leeds & Catlin Company, and your associates, servants, clerks, agents and workmen, and each and every one of you, from manufacturing, using or selling, until further order of this Court, sound reproducing apparatus or devices embodying the subject matter of claim 35 of the Letters Patent in suit, which claim reads as follows, namely:

"35. In a sound reproducing apparatus consisting of a traveling tablet having a sound record formed thereon and a reproducing stylus shaped for engagement with said record and free to be vibrated and propelled by the same, substantially as described,"

And from manufacturing, using or selling, or in any way
15 disposing of apparatus or devices which embody the method specified in Claim 5 of Letters Patent in suit, which claim reads as follows, namely:

"5. The method of reproducing sounds from a record of the same which consists in vibrating a stylus and propelling the same along the record by and in accordance with the said record, substantially as described."

And from using or employing in any way the method specified in said Claim 5.

Witness the Honorable Melville W. Fuller, Chief Justice of the United States, at the City of New York, on the 27th day of October, 1906.

JOHN A. SHIELDS, *Clerk.*

HORACE PETTIT,
Of Counsel for Complainants.

(Endorsed:) No. 8797—United States Circuit Court, Southern District of New York.—In Equity.—Victor Talking Machine Co. and The United States Gramophone Company, Complainants, *vs.* Leeds & Catlin Company, Defendant.—Preliminary Injunction.

I hereby certify, That on the 29th day of October, 1906, at the City of New York, in my district, I served the within Preliminary Injunction upon the within-named defendant Leeds & Catlin Company by exhibiting to Edward F. Leeds, as President of said Company at No. 53 East 11th Street, N. Y. City, the within original, and at the same time leaving with him a copy thereof. Wm. Henkel,

United States Marshal, Southern District of New York. Dated Oct. 29th, 1906.

U. S. Circuit Court, Southern District of New York. Filed Oct. 29th, 1906, John A. Shields, Clerk.

(A Copy.)

JOHN A. SHIELDS, *Clerk.*

16 Circuit Court of the United States, Southern District of New York. In Equity.

No. 8797.

VICTOR TALKING MACHINE COMPANY and UNITED STATES GRAMOPHONE COMPANY, Complainants,

vs.

LEEDS & CATLIN COMPANY, Defendant.

Affidavit of Thos. W. Luck.

Court Attachment for Contempt.

STATE OF NEW YORK, *City and County of New York:*

Thomas W. Luck, being duly sworn according to law, deposes and says as follows:

I am of lawful age and my residence is Arlington, New Jersey.

On the eighth day of November, 1906, I went to the place of business of the Leeds & Catlin Company, at No. 53 East Eleventh street, Borough of Manhattan, City and County of New York.

When I went into said place of business I told the sales person who came to wait upon me that I wished to buy some records for talking machines and was given a catalogue, from which I picked out certain numbers or selections, which I told said sales

17 person I wished to purchase. The records which I so selected were then and there delivered to me by said sales person, and I paid for same four dollars and twenty cents and received a receipted bill therefor, which is attached hereto and marked "Complainant's Exhibit" Luck Bill, and *and* upon which I have placed my initials and the date as follows: "T. W. L. 11/8/06." As shown by said bill, I purchased seven records, and on the back of each of those seven records I have scratched my initials and the date as follows: "T. W. L. 11/8/06."

The titles of the records which I have so purchased are as follows: Lonesome Little Maid, No. 45,260; Alice, Where Art Thou Going, No. 45,288; A Warrior Bold, No. 45,290; A Banjo Evangelist, No. 44,816; She's Just a Little Different from the Others that I Know, No. 44,918; He Laid Away the Suit of Gray to Wear the Union Blue, No. 44,910; My Cozy Corner Girl, No. 44,915.

The said seven records accompany this affidavit and are marked Complainant's Exhibit Luck Records No. 1, No. 2, No. 3, No. 4, No. 5, No. 6 and No. 7.

When I paid for these records and they were delivered to me, I left the said place of business.

(Sd.) THOMAS W. LUCK.

Subscribed and sworn to before me the seventeenth day of November, 1906.

(Sd.) HERMAN J. HAAS,
[SEAL.] *Notary Public* (*No.* 239), *New York County.*

18 No claims allowed unless made within fifteen days after shipment. Claims for Breakage, Loss and Detention to be made on the Transportation Companies.

Our responsibility ceases when we obtain a receipt for goods shipped in good order.

Leeds & Catlin Co.

Making the Loudest and Clearest Cylinder and Disc Records at 53 East Eleventh Street.

Terms

Conveyance

NEW YORK, *Nov'r 8th*, '06.

Sold to Cash

Your Order No.

7 Imperial Records at .60..... 4.20

Received payment,

LEEDS & CATLIN CO.
J. H. D.

T. W. L.
11/8/06.

Circuit Court of the United States, Southern District of New York.
In Equity. No. 8797.

VICTOR TALKING MACHINE COMPANY and UNITED STATES GRAMOPHONE COMPANY, Complainants,
vs.
LEEDS & CATLIN COMPANY, Defendant.

COMPLAINANTS' EXHIBIT LUCK BILL.

(Sd.) HERMAN J. HAAS,
[NOTARY SEAL.] *Notary Public, New York County,* #239.

19 Circuit Court of the United States, Southern District of New York. In Equity.

No. 8797.

VICTOR TALKING MACHINE COMPANY and UNITED STATES GRAMOPHONE CO., Complainants,

vs.

LEEDS & CATLIN COMPANY, Defendant.

Affidavit of Charles M. Hemenover.

Sur-attachment for Contempt.

STATE OF NEW YORK, *City and County of New York:*

Charles M. Hemenover, being duly sworn according to law, deposes and says as follows:

I am of lawful age, and reside at East Orange, in the State of New Jersey.

On November 9, 1906, I went to the establishment of the Leeds & Catlin Company, No. 53 East Eleventh street, Borough of Manhattan, City and State of New York, and told the person who waited upon me that I wished to purchase some Imperial records. I was given some catalogues of the records, from which I selected five Imperial records, and told the sales person that I wished to purchase same. These records which I so selected were taken out of their stock and delivered to me, and I paid the sales person who
20 waited upon me three dollars for same, and then left the said place of business of the Leeds & Catlin Company.

The said five records which I so purchased have labels on them containing the following designations, namely, El Capitan, 44,828; Stars and Stripes Forever, 44,894; Traumeri, 45,252; Yeoman Wedding Song, 45,286; A Warrior Bold, 45,290.

The said five records which I so purchased accompany this affidavit, and are marked "Complainants' Exhibits Hemenover Records" No. 1, No. 2, No. 3, No. 4, No. 5, and on the back of each of these records I have scratched my initials and the date as follows, namely, C. M. H., 11/9/06.

(Sgd.) CHARLES H. MEMENOVER.

Subscribed and sworn to before me this seventeenth day of November, nineteen hundred and six.

(Sgd.) HERMAN J. HAAS,

[SEAL.] *Notary Public* (*No.* 239), *New York County.*

21 Circuit Court of the United States, Southern District of New York. In Equity.

No. 8797.

VICTOR TALKING MACHINE — and UNITED STATES GRAMOPHONE COMPANY, Complainants,
vs.
LEEDS & CATLIN COMPANY, Defendant.

Affidavit of Albert Platz.

Sur-attachment for Contempt.

STATE OF NEW YORK, *City and County of New York:*

Albert Platz, being duly sworn according to law, deposes and says as follows:

I am of lawful age and reside at No. 344 De Voe street, Brooklyn, N. Y., and am engaged in selling talking machines, talking machine records and supplies. For over two and one-half years I have been dealing in and selling only the talking machines and talking machine records manufactured by the Victor Talking Machine Company, of Camden, N. J., and am thoroughly conversant with the construction and operation of said Victor Talking Machine and records.

On November 4, 1906, I wrote and mailed a letter to the Leeds & Catlin Company, at No. 53 East Eleventh street, Borough of Manhattan, State of New York, on my letter head, which stated that I was an exclusive dealer in Victor machines and records, which
22 letter head also contained the well known trade-mark and device of the Victor Talking Machine Company, namely, the picture of a dog listening to a talking machine. A copy of this letter is attached hereto and marked "Complainant's Exhibit Platz Letter," from which it will be seen that I asked the said Leeds & Catlin Company to quote me prices on talking machine records and in which I also stated that I dealt exclusively in the Victor Talking Machine Company's goods. On or about November tenth, nineteen hundred six, I received a letter from the said Leeds & Catlin Company in reply to my said letter of November 4th, in which the said Leeds & Catlin Company quoted me prices for their records, and which letter is attached hereto and marked "Complainant's Exhibit Platz-Leeds Letter." After receiving the said Complainant's Exhibit Platz-Leeds Letter I wrote again to said Leeds & Catlin Company ordering two dozen records, the order comprising two each of a dozen selections which I picked out from their catalogue which they sent me, and sending them with said letter a post-office money order for seven dollars and twenty cents in payment for said records. This letter and money order I mailed to the Leeds & Catlin Company on November 14, 1906. On November 16th I went to the establishment of the Leeds & Catlin Company, at No. 53 East Eleventh street,

Borough of Manhattan, State of New York, and introduced myself as the Albert Platz who had written to them on November 4th, and to which they had replied by their letter of November 7th, hereto attached, and said that I wanted some records at once. I asked them when they would be able to deliver them, and they said I would probably receive them on Monday, the 19th inst. I told them to let that order stand and to supply me with some records at once. Upon my request they got out my letter of November 4th, in which I ordered the said two dozen records, and, after comparing the numbers with the numbers in the catalogue, I then asked them
23 to supply me with the same records, that is to say, two records each of a dozen selections as I had ordered. I went over the numbers which I heretofore selected, and from the stock in the office of the said Leeds & Catlin Company they secured for me twenty-three of this order of two dozen. I purchased these twenty-three records and paid six dollars and ninety cents for same, and received from the sales person who sold them to me a receipted bill, showing that I paid six dollars and ninety cents for the same, which bill is attached hereto and marked "Complainants' Exhibit Platz Bill." The records were then wrapped up and delivered to me, and I left the said place of business of the Leeds & Catlin Company with the said twenty-three records in my possession.

The said twenty-three records which I so purchased from the Leeds & Catlin Company accompany this affidavit, and are marked "Complainants' Exhibits Plattz-Leeds and Catlin Co. Records."

(Sgd.) ALBERT PLATZ.

Subscribed and sworn to before me this seventeenth day of November, nineteen hundred six.

(Sgd.) HERMANN J. HAAS,
[SEAL.] *Notary Public* (*No.* 239), *New York County.*

(Cut) Telephone 18-88-Williamsburg.

Albert Platz, Exclusive Dealer in Victor Machines & Records, 344 Devoe Street.

BROOKLYN, N. Y., *Nov. 4th,* 1906.

Messrs. Leeds & Catlin.

DEAR SIRS: You will notice from my note-head that I am
24 a dealer in Victor talking machines and records exclusively. I would like to handle the Imperial record. Kindly write me and quote dealer prices,

Yours, &c.,

(Sd.) ALBERT PLATZ.

U. S. Circuit Court,
So. Dist. of New York.
In Equity. No. 8797.

VICTOR TALKING MACHINE CO. ET AL.
vs.
LEEDS & CATLIN CO.

COMPLAINANTS' EXHIBIT
PLATZ LETTER.

(Sd.) HERMAN J. HAAS,
[NOTARY SEAL.] *Notary Public, New York County, No.* 239.

Factory, Middletown, Conn. Laboratory at New York.

Leeds & Catlin Co.

Cable Address: Elansee.
Codes Used:
Western Union
A. B. C. 5th Edition.
Adams
Lieber.

Offices:
53 East Eleventh St.
New York.
Tel. 6706 and 6707 Gramercy.

Mr. Albert Platz, 344 Devoe Street, Brooklyn, N. Y.

DEAR SIR: Replying to your favor of the 4th inst., we enclose herewith catalogue of our Imperial Records. We will be pleased to sell you these at 30¢ each, F. O. B. Middletown, Conn. They are acknowledged to be the best records on the market, being
25 loud, clear, sweet-toned and up-to-date in every respect. The retail price of the Imperial record is 60¢ each.

Hoping to receive your order, we remain,
Very truly yours,

LEEDS & CATLIN CO.,
By H. LEEDS, JR.

Dictated.
Enclosure.

Circuit Court of the U. S.,
Southern District of N. Y.
In Equity. No. 8797.

VICTOR TALKING MACHINE COMPANY ET AL., Complainants,
vs.
LEEDS & CATLIN COMPANY, Defendant.

COMPLAINANTS' EXHIBIT
PLATZ-LEEDS LETTER.

(Sd.) HERMAN J. HAAS,
[NOTARY SEAL.] *Notary Public, #239, New York County.*

26 No claims allowed unless made within fifteen days after shipment. Claims for Breakage, Loss and Detention to be made on the Transportation Companies.

Our responsibility ceases when we obtain a receipt for goods shipped in good order.

Leeds & Catlin Co.

Making the Loudest and Clearest Cylinder and Disc Records at 83 East Eleventh Street.

Terms

Conveyance.

NEW YORK, *Nov'r 16th*, 1906.

Sold to Albert Platz,

Your Order No.

23 Imperial Records at 30..... 6.90

Received payment,
LEEDS & CATLIN CO.,
Per J. H. D.

Circuit Court of the United States,
Southern District of New York.
In Equity. No. 8797.

VICTOR TALKING MACHINE COMPANY and UNITED STATES GRAMOPHONE COMPANY, Complainants,
vs.
LEEDS & CATLIN Co., Defendant.

COMPLAINANTS' EXHIBIT PLATZ'S BILL.

(Sd.) HERMAN J. HAAS,
[NOTARY SEAL.] *Notary Public, New York County*, #239.

27 Circuit Court of the United States, Southern District of New York. In Equity.

No. 8797.

VICTOR TALKING MACHINE COMPANY and UNITED STATES GRAMOPHONE COMPANY, Complainants,
vs.
LEEDS & CATLIN COMPANY, Defendant.

Affidavit — Charles K. Bennett.

Sur-attachment for Contempt.

COMMONWEALTH OF PENNSYLVANIA,
County of Philadelphia, ss:

Charles K. Bennett, being duly sworn according to law, deposes and says as follows:

I am of lawful age, and reside at Philadelphia, in the State of Pennsylvania, and am in the employ of the Victor Talking Machine Company of Camden, New Jersey. On Friday, November 2, 1906, I

went to the place of business of Leeds & Catlin Co. at 53 East Eleventh street, Borough of Manhattan, City of New York, and told the attendant there that I wished to purchase some "Imperial Records." By "Imperial" records I meant the disc sound records for use on talking machines of the disc type that were the special manufacture of the Leeds & Catlin Company, the word "Imperial" being the word by which these records have been designated on the
28 market. The attendant or salesperson who waited on me at the establishment of the Leeds & Catlin Company, as aforesaid, said that they could sell me some and I asked for two selections, giving the names of the records which I wanted. Said attendant or salesperson told me that they did not have them in stock. This salesperson then referred me to the catalogs of the Leeds & Catlin Company, giving the names and numbers of their records, and from these catalogs I selected six (6) records. The salesperson obtained these records from the stock in said establishment, which records were as follows: "Triplette," No. 4019; "America," No. 44,837; "La Paloma," No. 45,007; "Violin Solo," No. 45,250; "La Tosca," No. 5291, and "Fa-cination," No. 6073. I asked the salesperson the prices of these records, and was told that the first four above named were sixty cents (60c.) a piece and the last two were one dollar ($1) a piece.

Before purchasing these records I told this salesperson that I had at my home a talking machine of the manufacture of the Victor Talking Machine Co., informing him that it was a "Victor V." I asked him if I could use these records on this Victor talking machine, and he told me that I could, and went on further to state that he had at his home a Victor talking machine on which he played similar records. I then paid him $4.40 for these records, which were delivered to me and I left the said establishment.

While I was in the establishment of the said Leeds & Catlin Company the said attendant handed me five catalogs of the different disc records of their manufacture, upon which I have placed my initials and the date as follows: namely, "C. K. B. 11/2/06," and which were marked "Complainants' Exhibits, Leeds & Catlin Catalogs, Nos. 1, 2, 3, 4 and 5."

The said six records which I so purchased from the Leeds
29 & Catlin Company on November 2, 1906, are herewith produced, and I have scratched on the back of each my initials and the date as follows: "C. K. B. 11/3/06." The said six disc sound records accompanying this affidavit are marked "Complainants' Exhibit, Bennett-Leeds & Catlin Records, Nos. 1, 2, 3, 4, 5 and 6" respectively.

(S'g'd) CHARLES K. BENNETT.

Subscribed and sworn to before me this 14th day of November, 1906.

(S'g'd) ALEXANDER PARK,
[SEAL.] *Notary Public*, 604 *Stephen Girard Bldg., Philadelphia.*

Commission expires Feb. 6, 1909.

3—308

COMPLAINANTS' EXHIBITS.

Bennett-Leeds & Catlin Catalogues Nos. 1, 2, 3, 4 and 5.
[See stipulation.]

30 Circuit Court of the United States, Southern District of New York. In Equity.

No. 8797.

VICTOR TALKING MACHINE COMPANY and UNITED STATES GRAMOPHONE COMPANY, Complainants,
vs.
LEEDS & CATLIN COMPANY, Defendant.

Affidavit of George M. Thompson.

Sur-attachment for Contempt.

STATE OF NEW YORK, *City and County of New York, ss:*

George M. Thompson, being duly sworn according to law, deposes and says as follows:

I am of lawful age, and reside at Jersey City, N. J., and my office is a No. 55 Liberty street, Borough of Manhattan, City and County and State of New York.

On Wednesday, November 7th, 1906, I went to the establishment of the Leeds & Catlin Company at No. 53 East Eleventh street, Borough of Manhattan, City of New York, in said State, and Mr. Charles K. Bennett, of Philadelphia, Pennsylvania, went with me.

I went to said establishment for the purpose of buying talking machine records, and was waited on by a salesman, and after
31 looking over the catalogue of the disc records of the Leeds & Catlin Company I selected six records and told the salesman who was waiting on me that I wished to purchase said six records. I then asked said salesman if I could use said records which I so intended to purchase on a talking machine of the manufacture of the Victor Talking Machine Company, and the said salesman in reply to said inquiry said that I could. I then paid said salesman five dollars and thirty-five cents ($5.35) for said records and they were delivered to me, and I left the establishment of the said Leeds & Catlin Company with said records in my possession.

On the back of each of said record which I so purchased as aforesaid I have scratched my initials and the date as follows: "G. M. T.—11/7/06."

The said sound records are entitled as follows, the designation hereafter stated appearing on labels on the face of said records, namely:

Pretty as a Butterfly, No. 7599, for which record I paid thirty-five cents ($.35).

The other five records which I purchased and for which I paid a dollar a piece are designated as follows: Ave Maria, No. 6003; Fascination, No. 6073; Deine blauen Augen, No. 15,349; Serenade, No. 15,408, and Lohengrin, No. 25,084.

The said sound records which I so purchased accompany this affidavit and are marked Complainant's Exhibits Thompson Records Nos. 1, 2, 3, 4, 5 and 6.

(Sgd.) GEORGE M. THOMPSON.

Sworn to before me this 16th day of November, 1906.

(Sgd.) HELEN G. CASSIDY,

[SEAL.] *Notary Public, Queens County.*

Cert. filed in New York and Kings Counties.

32 Circuit Court of the United States, Southern District of New York. In Equity.

No. 8797.

VICTOR TALKING MACHINE COMPANY and UNITED STATES GRAMOPHONE COMPANY, Complainants,

vs.

LEEDS & CATLIN COMPANY, Defendant.

Affidavit No. 2, Charles K. Bennett.

Sur-attachment for Contempt.

COMMONWEALTH OF PENNSYLVANIA, *County of Philadelphia, ss:*

Charles K. Bennett, being duly sworn according to law, deposes and says as follows:

I am of lawful age and reside at Philadelphia, in the State of Pennsylvania, and am in the employ of the Victor Talking Machine Company, of Camden, New Jersey. On Wednesday, November 7, 1906, I went to the establishment of Leeds & Catlin Company at 53 East Eleventh street, Borough of Manhattan, City of New York, accompanied by Mr. George M. Thompson of 55 Liberty street, in the said City of New York. When I went into said establishment I selected from the catalogs of the Leeds & Catlin Company two disc sound records, one of which was called "King
33 Cotton" No. 45,269 and the other entitled "Carmen" No. 15,365. I told the sales person who waited on me that I wanted to buy these records, and he got them out for me and delivered them, and I paid sixty cents (60¢) for the "King Cotton" record and one dollar and fifty cents ($1.50) for the "Carmen" record. While I was purchasing these records said Thompson was also looking through the catalogs of the Leeds & Catlin Company and was selecting records. After he had made a certain selection of records, said Thompson asked the salesperson who was waiting on

us whether the said records which he had selected could be used on a machine manufactured by the Victor Talking Machine Company and the attendant told him they could be so used. The said Thompson then paid for said records in my presence and they were delivered to him and then we both departed from said store.

The two records above noted which I purchased, November 7, 1906 from the Leeds & Catlin Company, accompany this affidavit and are marked "Complainants' Exhibit, Bennett—Leeds & Catlin Records, Nos. 7 and 8," and I have placed my initials and the date on the back of each as follows: "C. K. B. 11/7/06."

(Sgd.) CHARLES K. BENNETT.

Subscribed and sworn to before me this 14th day of November, 1906.

(Sgd.) ALEXANDER PARK,
[SEAL.] *Notary Public*, 604 *Stephen Girard Bldg., Philadelphia.*

Commission expires Feb. 6, 1909.

34 In the Circuit Court of the United States for the Southern District of New York. In Equity.

No. 8797.

VICTOR TALKING MACHINE COMPANY and UNITED STATES GRAMOPHONE COMPANY, Complainants,
vs.
LEEDS & CATLIN COMPANY, Defendant.

Re Contempt Proceedings—Affidavit of Albert C. Middleton on Behalf of Complainants.

COMMONWEALTH OF PENNSYLVANIA,
City and County of Philadelphia, ss:

Albert C. Middleton, being duly affirmed according to law, deposes and says as follows:

I am Secretary of the Victor Talking Machine Company, one of the complainants herein, and have been since its organization in October, 1901. Since the organization of the said company, I have been in close touch with the manufacturing and selling departments, and am very familiar with the company's business, which is that exclusively of manufacturing and selling disc talking machine records and machines for reproducing sound therefrom.

I am familiar with the disc records of the defendant, Leeds & Catlin Company, such as were sold and manufactured by that
35 company prior to and since the injunction of October 27, 1906, in this suit. The said disc records of the defendant company can only be intended for use in combination with reproducing apparatus, or machines, similar to the defendant's ma-

chines, in evidence in this case, and in carrying out the method of reproducing sound, which consists of the vibrating of a stylus and propelling the same along the record, by and in accordance with the record, such as claimed by claims 5 and 35 of the patent in suit.

I am very familiar with the talking machines and records upon the market, and know that the only talking machines which are commercially upon the market for reproducing sound from disc records of this character are those such as Complainants' Exhibit Defendant's Machine, in evidence in this case.

The disc records manufactured and sold by the defendant are identical in all material respects with the disc records which have, for a number of years, been manufactured by the complainant, the Victor Talking Machine Company, and its licensees, as well as by sundry infringers, and all of these disc records of this construction have been designed only for use in combination with sound reproducing apparatus, having a stylus shaped for engagement with the record, on the traveling tablet, free to be vibrated and propelled by the record, or traveling tablet, in accordance with the combination claimed in claim 35, and in accordance with the method of claim 5, of the patent in suit, and for no other purpose.

There never has been upon the market, since the organization of the Victor Talking Machine Company, nor at any other time, to this deponent's knowledge, any other practical apparatus which could reproduce sound from disc records similar to these defendant's records, and the only reproducing apparatus upon the market for this purpose is that which has a reproducing stylus shaped for engagement with the said records, free to be vibrated and propelled by the record.

36 There are to-day in use in the United States many hundreds of thousands of reproducing apparatus of this construction designed to be operated in this manner for reproducing sound from disc records similar to the said records manufactured by the defendant, and such records, when sold, can only be practically utilized for sound reproduction purposes in connection with this sound reproducing apparatus referred to, which, in combination with the said records, forms the subject matter of this suit.

The said disc records, as far as this deponent has any knowledge, have no other useful purpose.

There are to-day, in addition to the regularly licensed machines scattered throughout this portion of the United States and throughout the United States generally, many hundreds of reproducing apparatus or machines which have been made and sold in violation of the claims of the patent in suit, for instance, notably, among others, the Talk-O-Phone machine, enjoined by this Court, which are in use in the homes of individuals, hotels, restaurants, places of amusement, &c. It is very difficult, if not almost impossible, to restrain the use of all these machines, as it would require separate suits in each of the hundreds of cases. The owners of these machines are constantly purchasing disc talking machine records for use in combination with this reproducing apparatus, from dealers selling infringing records,

such as the disc records which the defendant company has sold, and is now continuing to sell, thus depriving the complainant of a very considerable portion of the revenue from these records, which form an essential and important element of the combination, and which are designed to be used in reproducing sound, in accordance with the method of the claim 5 of the patent. The purchasers of infringing machines, such as the Talk-O-Phone, who, at the time of purchase purchased the Leeds & Catlin records with it, are very apt to continue purchasing the make of records which they originally purchased with the infringing machine, if the defendant company is
37 allowed to continue the manufacture and sale of said infringing records.

A large portion of the revenue of the complainant company is derived from the sale of its disc records. A purchaser of a machine or reproducing apparatus, for use in reproducing from the record, frequently expends very much less for the machine than he does for his collection of records, as records are being constantly purchased by the purchaser of a machine from time to time; $25 frequently represents the purchase of a machine, while the owner of that machine, in a short space of time, will expend at least as much as $100 for records. The revenue, therefore, to the Victor Talking Machine Company from records, which is a material part of the combination of the claims in suit, is frequently very much larger than the revenue from the reproducing apparatus alone.

(S'g'd) ALBERT C. MILLDETON.

Affirmed and subscribed to before me this sixteenth day of November, A. D. 1906.

[SEAL.] (S'g'd) ALEXANDER PARK,
Notary Public, 604 *Stephen Girard Bldg., Philadelphia.*

Commission expires Feb. 6, 1909.

38 In the Circuit Court of the United States for the Southern District of New York. In Equity.

No. 8797.

VICTOR TALKING MACHINE COMPANY AND UNITED STATES GRAMOPHONE COMPANY, Complainants,
vs.
LEEDS & CATLIN COMPANY, Defendant.

Re Contempt Proceedings.—Affidavit of Charles K. Haddon on Behalf of Complainants.

COMMONWEALTH OF PENNSYLVANIA,
City and County of Philadelphia, ss:

Charles K. Haddon, being duly sworn according to law, deposes and says as follows:

I am treasurer of the Victor Talking Machine Company, one of the complainants herein, and have been for several years past; I have

been connected with the company, as an officer, since its organization in 1901, and during all that time have been in close touch with the manufacturing and selling departments, and very familiar with the company's business, and with the talking machine business generally. I have known of the Leeds & Catlin Company practically since its organization, and am familiar with the records, such as manu-
39 factured and sold by that company, both prior to and since the injunction of October 27, 1906, in this suit. I am, and have been since 1901, very familiar with the talking machines and records upon the market, especially the disc records, and machines for reproducing sounds therefrom, and know that the only disc talking machines which are and have been commercially upon the market, for reproducing sound from disc records of this character, are those which are constructed in accordance with the complainants' patent in suit, for operation in the manner described therein, such as Complainants' Exhibit, Defendant's Machine, in evidence in this case.

The disc records manufactured and sold by the defendant are identical in all material respects with the disc records which have, for a number of years, been manufactured by the complainant, the Victor Talking Machine Company, and its licensees, as well as by sundry infringers, and all of these disc records of this construction have been designed only for use in combination with sound reproducing apparatus, having a stylus shaped for engagement with the record on the traveling tablet, free to be vibrated and propelled by the record, or traveling tablet, in accordance with the combination claimed in claim 35, and in accordance with the method of claim 5, of the patent in suit, and for no other purpose.

The said disc records of the defnedant company can only be intended for use in combination with reproducing apparatus, or machines, similar to the defendant's machines, in evidence in this case, and in carrying out the method of reproducing sound, which consists of the vibrating of a stylus and propelling the same along the record, by and in accordance with the record, such as claimed by claims 5 and 35 of the patent in suit.

There never has been upon the market, since the organization of the Victor Talking Machine Company, nor at any other time, to this deponent's knowledge, any other practical apparatus
40 which could reproduce sound from disc records similar to these defendant's records, and the only reproducing apparatus upon the market is that which has a reproducing stylus shaped for engagement with the said records, free to be vibrated and propelled by the record.

There are to-day, in use in the United States, many hundreds of thousands of reproducing apparatus of this construction, designed to be operated in this manner for reproducing sound from the disc records similar to the said records manufactured by the defendant, and such records, when sold, can only be practically utilized for sound reproduction purposes in connection with this sound reproducing apparatus referred to, which, in combination with the said records, forms the subject matter of this suit.

The said disc records, as far as this deponent has any knowledge, have no other useful purpose.

The Victor Talking Machine Company, by the sale of its reproducing apparatus, never licensed, or intended to license, the purchaser, or anyone else, to supply the travelling tablet or record, the other element of the combination of claim 35, for reproducing sound in accordance with the method of claim 5. A large portion of the Victor Company's business has been, and is, in the manufacture and sale of disc records, for use in connection with the reproducing apparatus which it makes and sells, and a large proportion of its profit is derived therefrom. When it sells a reproducing apparatus to a purchaser, which is part of the combination of claim 35, it is to be used in combination with the other element of the claim, sold by the complainants, the traveling tablet or record, which it also sells to the purchaser at a separate price, distinct from the price of the reproducing element. The profit from the reproducing element is only a portion of the complainant's profit, the other portion of which is derived from the sale of the traveling tablet or record. The
41 complainant could not afford to sell the reproducing apparatus at the price which it does if it were not for the fact that the balance of the profit is to be derived from the records manufactured and sold by the complainant.

(S'g'd) CHARLES K. HADDON.

Sworn to and subscribed before me this sixteenth day of November, A. D. 1906.

(Sgd.) ALEXANDER PARK.
[SEAL.] *Notary Public*, 604 *Stephen Girard Bldg., Philadelphia.*

Commission expires Feb. 6, 1909.

Circuit Court of the United States, Southern District of New York.
In Equity.

No. 8797.

VICTOR TALKING MACHINE COMPANY ET AL.
against
LEEDS & CATLIN COMPANY.

Affidavit of Harry Cobb Kennedy, Sur Attachment for Contempt, on Behalf of Complainants.

STATE OF NEW YORK, *County of New York*, ss:

Harry Cobb Kennedy, being duly sworn, according to law, deposes and says as follows:

I am a counselor at law and have often testified as an ex-
42 pert in causes based upon the infringement of Letters Patent pending in the Circuit Courts of the United States. For over three years, last past, I have devoted a large portion of my time to the preparation and prosecution of a large number of applications for Letters Patents before the United States Patent Office,

relating to the recording and reproducing of sound, especially of that class known as the gramophone, the subject-matter of the patent in suit, and am familiar with the construction and operation of the reproducing apparatus of the patent No. 534,543 in suit, namely, the reproducer and the traveling tablet or disk record, forming the subject-matter of claim 35 and used in the method of claim 5 of the said patent in suit. I have examined and understand the construction and operation of Complainants' Exhibits Complainants' Machine and Record, and Defendant's Machine and Record, in evidence in this cause, which were before this Court on the motion for preliminary injunction, and have examined and understand the construction and operation of Complainants' Exhibits in the matter of these proceeding for attachment for contempt, namely, Bennett, Leeds & Catlin Records, Nos. 1 to 8; Thompson Records, Nos. 1 to 6; Hemenover Records, Nos. 1 to 5; Luck Records, Nos. 1 to 7, and the twenty-three Platz-Leeds & Catlin Co. Records, and I find that the records above enumerated in the matter of the contempt proceedings are the same structurally as Complainants' Exhibits, Complainants' and Defendant's Record before this Court on the motion for preliminary injunction; each of said record exhibits so named consist of a flat disk having a spiral groove of even depth provided on its face, said grooves having lateral undulations representing sound waves and which are capable of reproducing the sound recorded thereon by means of a reproducing stylus as called for in claims 5 and 35 of the said patent in suit, that is to say, these defendant's records offered in evidence in these contempt proceedings are the same structurally as the
43 records which the defendant was enjoined from making, using or selling by the preliminary injunction in this cause.

I also state from my knowledge and experience in this art, that the said Complainants' Exhibits The Bennett, Thompson, Hemenover, Luck and Platz Records, are such that they can be used in the combination of claim 35 and in the method of claim 5 of said patent No. 534,543 in suit, are not intended for use in any other manner, and are incapable of use except in reproducing sound in the combination of claim 35 and in the method of claim 5 of the said patent No. 534,543 in suit.

(Sgd.) HARRY COBB KENNEDY.

Subscribed and sworn to before me this 19th day of November, 1906.

(Sgd.) JOHN A. SHIELDS,
[SEAL.] *U. S. Commissioner, S. D. N. Y.*

44 In the Circuit Court of the United States, Southern District of New York. In Equity.

No. 8797.

VICTOR TALKING MACHINE COMPANY and UNITED STATES GRAMOPHONE COMPANY, Complainants,
vs.
LEEDS & CATLIN COMPANY, Defendant.

Sur Contempt Proceedings.

Affidavit No. 2 of Albert C. Middleton on Behalf of Complainants.

CITY AND COUNTY OF PHILADELPHIA,
Commonwealth of Pennsylvania, ss:

Albert C. Middleton, being duly affirmed according to law, deposes and says as follows:

I am Secretary of the Victor Talking Machine Company, one of the complainants herein, and have been since its organization in October, 1901, and am the Albert C. Middleton who made affidavit in these proceedings November 16, 1906.

Since giving my above mentioned affidavit the defendant has presented certain opposing affidavits which I have seen, and in some of which it is stated, in substance, that complainants' sound
45 records intended for use in combination with complainants' reproducing apparatus embodying claims 5 and 35 can be used "but a very limited number of times." In the affidavit of Mr. Edward F. Leeds dated November 28, 1906, this is stated; it is there also stated that unless the material is unusually perfect, the record cannot be successfully played more than twenty-five or thirty times before it has to be renewed. It is also there stated that often a single reproduction, or two or three reproductions, will destroy the record, and that frequently a record becomes useless after being played ten or twelve times, and in exceptional cases they can be played as many as thirty times and as often as fifty or sixty times as a limit. It is also there stated that after a single playing of the record the deterioration of the record appears.

These statements are most inaccurate and misleading. I personally have had for several years past a great deal of experience in this particular line of testing disc records, similar to Complainants' Exhibits in this case, having a laterally undulating groove of even depth, and have many times made special tests to ascertain the quality and durability of the records.

I often take a record out of our stock as a sample record, and spend practically a whole afternoon and evening continuously testing it on one of our reproducing machines, playing the selection over and over again to ascertain whether the material of the record disc is kept up to our standard, besides other numerous and frequent tests which I make with different records at different times

for like purposes. I have been doing this at frequent intervals for three or four years.

The material of which the complainants' records are and have been made since the complainants have been manufacturing records is of the best and most durable character known to us for this purpose.

As a result of my tests I can positively affirm that com-
46 plainants' records can be played two hundred and fifty to three hundred times under ordinary conditions without any appreciable wear or depreciation in tone. This is a very conservative estimate; it is my opinion that complainants' records may be played as many as five hundred times without any material depreciation in tone to the average ear.

This is not true of many infringing records. I have frequently tested these records and have found that, with the material of which they are composed, they can only be played fifty or sixty times without depreciation.

I notice that one of the defendant's affidavits—that of Leo Moeller—states that the stylus is a sharp needle and cuts into and wears down the edges of the surface of the record.

I would say in this connection that this statement is very misleading and inaccurate. The point of a properly formed needle for this purpose, such as sold by the complainants, is specially ground and shaped, so as not to cut the record.

(Sgd.) ALBERT C. MIDDLETON.

Affirmed and subscribed before me this sixth day of December, 1906.

(Sgd.) ALEXANDER PARK,
[SEAL.] *Notary Public*, 604 *Stephen Girard Bldg., Philadelphia.*

Commission expires Feb. 6, 1909.

(Endorsed:) United States Circuit Court, Southern District of New York.—Victor Talking Machine Company *et al.*, Complainants, *vs.* Leeds & Catlin Company, Defendant.—*Re* Contempt proceedings. I hereby certify, That on the 19th day of November, 1906, at the City of New York, in my district, I served the within Order to Show Cause and Affidavits upon the within named defendant, Leeds & Catlin Company, by exhibiting to I. Allen Sankey, as Vice-Pres.
& Director of Leeds & Catlin Company at No. 135 5th Avenue,
47 N. Y. City, N. Y., the within originals, and at the same time leaving with him a copy of each thereof. I hereby further certify, That on the 19th day of November, 1906, at the City of New York, in my district, I served the within Order to Show Cause and Affidavits upon the within named defendant Leeds & Catlin Company by exhibiting to Frederic H. Ridgway, as Assistant Treasurer of said company at No. 53 East 11th St., N. Y. City, the within originals and at the same time leaving with him a copy thereof. William Henkel, United States Marshal, Southern District of New York. Dated Nov. 19th, 1906. U. S. Circuit Court, Southern District New York. Filed Nov. 19, 1906. John A. Shields, Clerk.

Circuit Court of the United States, Southern District of New York.
In Equity.

No. 8797.

VICTOR TALKING MACHINE COMPANY and UNITED STATES GRAMOPHONE COMPANY, Complainants,
vs.
LEEDS & CATLIN COMPANY, Defendant.

The Answer of the Defendant to Complainants' Petition for Order to Show Cause Why Defendant Should not be Attached for Contempt, &c.

To the Honorable the Judges of the United States Circuit Court for the Southern District of New York:

For answer unto complainants' said petition, defendant respectfully shows:

48 First. Defendant refers to and makes part of this answer the several affidavits hereto annexed and the papers filed of record, and the proceedings heretofore had in the above entitled cause.

Second. Defendant denies that it has in any way violated or disregarded the preliminary injunction mentioned in paragraph tenth of the petition, and denies that it has made, used or sold, or has permitted its directors, associates, officers, attorneys, solicitors, clerks, servants, agents, workmen or employees to make, use or sell sound reproducing records in infringement of the rights of the complainants herein since the entry of the decree herein granting the preliminary injunction, or since the affirmance of said decree by the United States Circuit Court of Appeals, or since the vacation of the stay of said decree, or since the issue of the mandat- of the Circuit Court of Appeals or the filing of the order of the Circuit Court upon said mandate or the service of the preliminary injunction issued thereunder. Defendant denies that it has made, used or sold since any of said times, sound reproducing records forming part of the sound reproducing apparatus or device forming the subject-matter of claims 5 and 35 of the Letters Patent in suit in infringement of the rights of the complainants herein or of either of them under said Letters Patent, and denies that it has made or sold the same to be used in the method specified in claim five of the Letters Patent in suit in infringement of the rights of the complainants herein under said Letters Patent.

Third. Defendant denies that by said preliminary injunction it was enjoined from making, using or selling sound reproducing records for sound reproducing purposes and alleges that said preliminary injunction enjoined defendant from making, using or selling only the sound reproducing apparatus or devices mentioned in said preliminary injunction, to which for greater particularity de-

fendant refers and makes the same a part of this answere as aforesaid.

49 Fourth. Referring to the eleventh paragraph of the petition, defendant again denies that it has in any way disregarded said preliminary injunction and denies that since said preliminary injunction was served upon it it has made or sold, or has permitted its directors, associates, officers, attorneys, solicitors, clerks, servants, agents, workmen or employees to make or sell sound reproducing records for use in carrying out the methods specified in claim 5 of the Letters Patent in suit in infringement of the rights of complainants herein under said Letters Patent, and denies that it has made or sold the same to others with the knowledge or intention that the same were to be used in carrying out the said method of claim 5 or in the combination of claim 35 of the Letters Patent in suit in infringement of the rights of the complainants herein under said Letters Patent, or without license from the complainants, and denies generally and specifically that it has done any of said things in infringement of the rights of the complainants herein or without the license of said complainants.

Fifth. Defendant further answering the said petition alleges that it has in no way violated or disregarded the aforesaid preliminary injunction or the aforesaid orders or decrees of court and alleges that it has faithfully and strictly obeyed and complied with in every respect the terms and requirements thereof.

For the reasons aforesaid and for the reasons and facts appearing in the annexed affidavits and papers herein referred to and made a part hereof, defendant prays that complainants' petition *that defendant be attached and punished for the alleged contempt set forth in said petition* be denied.

By LEEDS & CATLIN COMPANY,
EDWARD F. LEEDS, *Pres.*

LOUIS HICKS,
Solicitor and Counsel for Defendant.

50 STATE AND COUNTY OF NEW YORK, *ss:*

Edward F. Leeds, being duly sworn, says: That he is president of Leeds & Catlin Company, defendant corporation; that he has read the foregoing answer and knows the contents thereof, and that the same is true to his knowledge.

EDWARD F. LEEDS.

Sworn to and subscribed before me this 28th day of November, 1906.

[NOTARY'S SEAL.]

HARRY C. ADAMS,
Notary Public, New York Co.

Circuit Court of the United States, Southern District of New York.
In Equity.

No. 8797.

VICTOR TALKING MACHINE COMPANY and UNITED STATES GRAMOPHONE COMPANY, Complainants,
vs.
LEEDS & CATLIN COMPANY, Defendant.

STATE AND COUNTY OF NEW YORK, *ss:*

Edward F. Leeds, being duly sworn, says:

I am president of the Leeds & Catlin Company, defendants herein. I have been actively engaged in the talking machine business for the past fifteen or sixteen years, having been connect-d with the North American Phonograph Company, which was organized in
51 August, 1888, to exploit such business. I have been advised by counsel for defendant herein, Louis Hicks, Esq., that complainants seek to punish defendants upon this motion for an alleged violation of the preliminary injunction heretofore issued herein. I have read the annexed affidavit of said counsel for the Leeds & Catlin Company, and my understanding of the proceedings had in this suit and in the prior suit between these complainants and the American Graphophone Company upon the same patent is in accordance with the statement therein contained. In the prior suit against the American Graphophone Company, as appears from the record in said suit, the infringement charged was based upon a stipulation between counsel for complainants and defendants in that suit that defendant had made and sold a machine and a sound-record which were offered in evidence, and that the said record exhibit was made for use upon the said machine and was so used. The proof, therefore, was under the stipulation that the defendant in that suit made, sold and used all the elements covered by claims 5 and 35 of the patent in suit and infringement was accordingly found. The right to make and sell sound records independently of the machines was in no way litigated in the prior suit, and was not passed upon by the courts in the prior suit. Upon the motion for preliminary injunction in this suit, the infringement alleged was that defendant had sold a sound reproducing machine, known as the Ohio Talk-o-phone, together with disc sound records. The sound reproducing machine, or Talk-o-phone, was a machine not manufactured or sold by complainants or their licensees, and the combination of said machine and said sound records sold by defendent was held to be an infringement of claims 5 and 35 of the patent in suit, said holding being based upon the finding in the prior suit. The preliminary injunction and the decree, therefore, in this suit enjoins defendant from making, using or
52 selling sound reproducing apparatus or devices embodying the subject matter of claims 5 and 35 of the patent in suit,

and from using or employing in any way the method specified in said claim 5. The decree for preliminary injunction herein, which was entered May 2, 1906, was stayed pending appeal to the Circuit Court of Appeals. From the entry of that decree until the time of the affirmance thereof by the Circuit Court of Appeals defendant employed for the reproduction of sound, from the sound records manufactured and sold by it, only sound reproducing machines manufactured by complainants, which defendant had purchased, together with sound records manufactured by complainants from complainants and dealers in machines and records of complainants' manufacture. As soon as defendant was informed by counsel that the Circuit Court of Appeals had affirmed the decree for preliminary injunction herein, and long before the order of affirmance was entered in the Circuit Court of Appeals, and before the mandate of the Circuit — of Appeals issued, and before the preliminary injunction herein was issued or served, defendant discontinued the use of all sound reproducing machines except feed-device machines, such as the machines herewith submitted to the Court, marked "Exhibit A," together with the date of this affidavit and my name. The Leeds & Catlin Company was informed of the affirmance by the Circuit Court of Appeals on Friday, October 12, 1906, and at once discontinued the use of all sound reproducing machines except the feed-device machines above referred to. On Monday, October 15, 1906, defendant began to use and sell its sound records in connection with said feed-device machines exclusively, and on October 13, 1906, defendant ordered and purchased from the Talk-O-Phone Company one hundred such feed-device machines for use and sale in connection with its sound-records, receiving the first consignment thereof early Monday morning, October 15, 1906. As fully shown in the annexed
53 affidavit of defendant's counsel, complainants on the motion for preliminary injunction refused to contend that such feed-device machines were an infringement of any of the claims of the patent in suit, alleging that such mechanical feed-device machines were not in issue in this suit, and complainants' counsel requested the Court not to pass upon such mechanical feed-device machines, stating that the Court presumably would not desire to do so without a full discussion, which complainants' counsel refused to make. The Leeds & Catlin Company have been advised by counsel for defendant that such mechanical feed-device machines are not an infringement of the patent in suit, have not been held by the courts to be an infringement of the patent in suit, are not included in the terms of the preliminary injunction issued in this suit, and that complainants' counsel has refused to contend in this suit that such mechanical feed-device machines are an infringement of the patent in suit. The Talk-O-Phone Company immediately sold and shipped to defendant upon receipt of said order, said one hundred such mechanical feed-device machines, and the same were all received by the Leeds & Catlin Company long before October 27, 1906, the day on which the order was signed in the Circuit Court on the mandate of the Circuit Court of Appeals and before the issue or service on

October 29, 1906, of the preliminary injunction, and before any of the sales of records by defendant alleged in the moving papers upon this motion took place, the earliest sale alleged having been made, according to the affidavit of Bennett, on November 2, 1906.

In addition to purchasing the said one hundred mechanical feed device machines from the Talk-O-phone Company, defendant purchased necessary tools for the manufacture of similar mechanical feed-device machines and is now and has been since about the middle of October, 1906, actively engaged in the manufacture of mechanical feed-device machines on its own account for use
54 and sale with its disc sound records. As appears from the affidavits filed on behalf of defendant in opposition to the motion for preliminary injunction, the mechanical feed-device Talk-o-phones have been extensively advertised throughout the United States at an expense of about $20,000, and are well known to the trade. On November 2, 1905, at the Imperial Hotel in New York City, I first saw the mechanical feed-device Talk-o-phone in successful and perfect operation with disc sound records of different makes, such as those manufactured and sold by defendant. I annex hereto a copy of the advertisement of the Talk-O-Phone Company of such mechanical feed-device Talk-o-phones which appeared in the *Music Trade Review* for December 2, 1905. The Talk-o-phones with mechanical feed-devices are recording as well as reproducing machines. They will record sound upon the usual tablets and will reproduce sound from a record of the same after recording. Thus it appears that the movement of the stylus across the face of the record in such mechanical feed-device Talk-o-phones depends solely upon the mechanical feed-device, to do away with which was the basis of the invention of the patent in suit as embodied in claims 5 and 35 thereof as heretofore interpreted by the courts. Complainants' machines will not record, but will only reproduce, thus showing that complainants' machines depend entirely upon the record-groove for the movement of the stylus across the face of the record. This is the reason why complainants' counsel has refused to contend that the mechanical feed-device machines are involved in this suit.

Defendant is now and has been for some time past advertising in connection with its records the mechanical feed-device machines. I annex hereto a copy of one of defendant's advertisements which appeared in the *New York Herald* for Tuesday, October 23, 1906, on page 10 thereof. I annex also a copy of an advertisement inserted by defendant in the *Talking Machine World* for No-
55 vember 15, 1906. Defendant has adopted and is now putting upon its sound records a label stating that the record is sold for use on mechanical feed-device machines. I annex hereto a copy of such label. I have no personal knowledge of the sales of records by the Leeds & Catlin Company alleged in the moving affidavits upon this motion, and I have not seen the records which were purchased on behalf of complainants. The circumstances relating to such sales are dealt with in affidavits verified by those who have knowledge thereof. Very likely the employees of the Leeds & Catlin Company had not had sufficient time to put the annexed label upon

said records, but I am informed and believe that complainants' purchasers were fully informed with reference to defendant's mechanical feed-device machines. I refer particularly to the annexed affidavit of Mr. Louis H. Bunker, who though not an employee of the Leeds & Catlin Company, but being present and familiar with defendant's business, undertook to inform complainants' purchasers, as appears from Mr. Bunker's annexed affidavit, with reference to the mechanical feed-device machines.

As previously stated, I have been engaged in the talking machine business from its infancy and I am familiar with different kinds of records and different kinds of talking machines which from time to time have been made, used and sold. Mr. Emile Berliner, when testifying in the prior suit, stated that not till the autumn of 1894 were talking machines sold in which a feed-screw for the purpose of propelling the reproducing sound-box across the record was dispensed with and in which the invention claimed in claims 5 and 35 of the patent in suit was embodied. Possibly a few such machines were sold in the autumn of 1894, but no great quantity of such machines were sold until a much later date. Prior to 1894, to my knowledge, many different varities of talking machines, all operating by mechanical feed-devices or feed-screws, had gone
56 into extensive use. Such talking machines employed cylindrical as well as disc or flat sound-records. The original graphophones employed disc sound records and a reproducing sound-box propelled across the record by a mechanical feed-device or feed-screw. More-ver, Berliner's first gramophone designed for the reproduction of sound from disc sound records operated by a mechanical feed-device. This is shown by matter of record in this suit, to wit: the article in the *Electrical World* for November 12, 1887, where the Berliner gramophone for the recording and reproducing of sound in and from records having lateral undulations and by means of mechanical feed-devices is fully described and illustrated, and wherein the idea of dispensing with the mechanical feed-device is thrown out as a mere suggestion. I recollect that in the early days of the North American Phonograph Company, a year or more prior to August 21, 1894, when the company went into the hands of its Receiver, Mr. Hardin, the Berliner gramophone with mechanical feed-device was exhibited to the officers of the North American Phonograph Company, which company was dealing and had from the time of its organization in August, 1888, dealt in the Edison phonograph and the Bell and Tainter graphophone, which graphophone, as above stated, in its original form employed disc sound-records with mechanical feed-devices. I have had in my possession for many years a talking machine employing a disc sound-record and a mechanical feed-device for moving the stylus across the face of the record. This machine was constructed by M. L. Deering in accordance with the general principles of Letters Patent of the United States No. 428,273, of May 20, 1890, granted to him on an application filed December 20, 1888, for a graphophone. It has long been known that the graphophone could be adapted for use with a flat disc record having either vertical or lateral undulations,

such fact having been pointed out in Patent No. 385,886, to Tainter, granted July 10, 1888, upon an application filed December
57 24, 1887, and, of course, Berliner's early gramophone shows the same thing.

In addition to the mechanical feed-device talking machines such as the early Berliner gramophone, the Bell & Tainter graphophone, the Deering graphophone, constructed and designed for use with flat disc records having lateral or vertical undulations, and in addition to the mechanical feed-device Talk-o-phones and the mechanical feed-device machines which defendant is now engaged in manufacturing, it appears from the affidavit of Loring L. Leeds hereto annexed, and it is a fact well known to dealers and users of talking machines and disc sound-records, that the Valiquet Novelty Company, of 50 Columbia street, Newark, N. J., is preparing to manufacture and sell disc talking machines employing disc sound-records having lateral undulations and a mechanical feed-device to cause the reproducing sound box and stylus to move across the face of the record as in the machines of the prior art, to wit: the Berliner gramophone, operating by mechanical feed-device, the graphophone and the phonograph. In fact, talking machines of different constructions designed for use with flat disc sound-records having lateral or vertical undulations and operating means of mechanical feed-devices to cause the stylus and reproducing sound-box to move across the face of the record have been continuously devised, constructed and put into use ever since Edison and Bell and Tainter invented the phonograph and the graphophone. The activity in this field of invention and construction is greater to-day, to my knowledge, than it ever was. Thousands and thousands of patents for the construction of talking machines, and especially of talking machines of the kind referred to have been issued in the United States and foreign countries. I continually receive information of the manufacture and use of such machine as the mechanical feed-device Talk-o-phone and similar mechanical feed-device machines. Among the
58 many ingenious mechanical feed-device machines which have been constructed and patented for the reproduction of sound from disc sound-records having lateral undulations is that shown in United States Patent No. 604,289, of May 31, 1898, to J. W. Jones for a sound reproducing machine, a copy of which patent is hereto annexed. It appears from the testimony of Albert T. Armstrong, now deceased, given in a suit between this defendant and the American Graphophone Company that on October 30, 1898, a contract was entered into between said Jones and the American Graphophone Company for the manufacture of Jones' sound reproducing machines set forth in said Letters Patent No. 604,829, the Graphophone Company agreeing to pay said Jones a royalty of from 25 cents to $1.50 on each machine manufactured under said patent. The said contract also provided for the manufacture of disc sound-records having lateral undulations for use with said machines. Mr. Armstrong further testified that the International Stylophone Company was on July 11, 1899, licensed under said Jones' patents to make talking machines similar to those which the American Graphophone Com-

pany was licensed to make under the agreement of October 30, 1898. As I have had great experience with talking machines of all kinds, I am able to state that the Jones machine shown in said patent No. 604,829 is a practical machine operating by means of a mechanical feed-device for the reproduction of sound from disc sound records having lateral undulations. Although the mechanism is slightly different, the operation is the same in principle as the operation of machines like the mechanical feed-device Talk-o-phone, the Edison phonograph and the graphophone of Bell & Tainter.

Without further going into details, it sufficiently appears, and it is the fact, that the statements contained in the moving papers upon this motion, especially in the affidavits of Middleton, Haddon, Kennedy and elsewhere, to the effect that disc sound-records
59 such as defendant's disc sound-records can only be intended for use in combination with producing aparatus or machines such as complainants' machines operating according to the invention of claims 5 and 35 of the patent in suit, are entirely false and misleading. Such disc sound-records existed before the date of the invention of the patent in suit, were used on machines not constructed according to the invention of the patent in suit and operating by mechanical feed-devices before the date of the invention of the patent in suit, and such sound-records have continuously been used from a date prior to the invention of the patent in suit down to the present day upon mechanical feed-device machines.

The Leeds & Catlin Company has, moreover, for several years past and is still manufacturing its disc sound-records having lateral undulations and selling the same for export and exporting the same. Millions of sound records and talking machines have been exported from the United States to foreign countries, and the Leeds & Catlin Company has sold for export and has exported thousands and thousands of flat disc sound-records having lateral undulations. One of the principal records made and sold by defendant is the Imperial record, a disc sound-record having lateral undulations. The Imperial record is exported and has been exported in large quantities for several years past, the Leeds & Catlin Company having sold the same for export and exported the same and others in the United States having purchased the same for export. I annex hereto a copy of an advertisement in the Talking News, published June 1, 1906, in London, England. Said advertisement shows defendant's Imperial records and advertises the same for sale in London, England, by Cook's Athletic Company, L. T. D. Another house, the Imperial Record Company, has been organized by London dealers who purchase from defendants to sell in England defendant's
60 Imperial records, and said purchasers have purchased from defendant and sold in England thousands of defendant's Imperial records. Defendant's records are also exported to Canada, India, and other foreign countries.

Until the recent purchase by defendant of the aforesaid one hundred feed-device Talk-o-phones and the commencement by defendant in October, 1906, of the manufacture of such feed-device talking machines, defendant company had confined itself to the

manufacture and sale of sound-records including cylinder and disc-sound-records. As already shown of record in this suit, however, in the settlement of an account defendant took and sold a small number of Talk-o-phones without mechanical feed-devices upon the basis of which defendant was found to have infringed claims 5 and 35 of the patent in suit. With the exception of said few Talk-o-phones without mechanical feed-devices which are no longer manufactured or sold, defendant never purchased, used or sold any talking machine without a mechanical feed-device except a few purchased before affirmance of the order for preliminary injunction from the complainants and complainants' licensees. So far as I am aware, no talking machines embodying the invention of claims 5 and 35 of the patent in suit, that is, talking machines without mechanical feed devices, are now manufactured and sold in this country by others than complainants and complainants' licensees, the American Graphophone Company and the Universal Talking Machine Company.

In the affidavit of Middleton, filed in support of this motion, it is alleged that:

"There are to-day, in use in the United States, many hundreds of thousands of reproducing apparatus of this construction, designed to be operated in this same manner for reproducing sound from disc records similar to the said records manufactured by the defendant."

61 The hundreds of thousands of reproducing apparatus referred to by Mr. Middleton are the reproducing machines manufactured and sold by complainants and its licensees, the American Graphophone Company and the Universal Talking Machine Company, in accordance with the invention of claims 5 and 35 of the patent in suit. To my knowledge the complainants and their licensees have sold the sound reproducing machines manufactured by them and embodying the invention of claims 5 and 35 of the patent in suit to dealers and users without any restriction whatever as to the sound-records which should be used upon said machines for the reproduction of sound thereby, and they have also, to my knowledge, manufactured and sold such machines in combination with flat disc sound records having lateral undulations without any restriction whatever as to the sound records which should be used for the reproduction of sound by such machines. Moreover, not only has this been the course of business established from the beginning by complainants and their licensees, but it has been the universal practice among the purchasers of such machines from complainants and its licensees to use upon such machines for the reproduction of sound, not only the sound-records purchased from complainants and their licensees, but also sound-records purchased from other manufacturers thereof within the United States, including sound-records made and sold by such companies as the American Record Company and the International Record Company. A purchaser of such machine made and sold by the American Graphophone Company has been accustomed to use thereon not only sound-records made and sold by that company, but also sound-records made and sold by complainants, and purchasers of complainants' said

machines have been accustomed to use thereon not only complainants' records, but also the records made and sold by the American Graphophone Company. The same is true of the machines and records made and sold by the Universal Talking Machine
62 Company, complainants' licensees. Complainants have never in any way intimated and have never imposed the restriction when selling their said machines and records that only records of complainants' manufacture could be used in connection with machines of their manufacture, nor have complainants' licensees given any such intimation or made any such restriction, and purchasers throughout the United States uniformally understand that in purchasing the said machines from complainants and its licensees they purchase said machines without any restriction whatsoever as to the records to be used therewith.

I have been engaged in the manufacture of sound-records of the disc and cylinder type having lateral and vertical undulations for the past fifteen years. I have, therefore, acquired a large experience and knowledge of talking machines and sound-records used therewith. The sound-record is not a part of the sound reproducing apparatus or machine which is permanent; it is essentially a temporary part, perishable in its nature and intended frequently to be replaced. The rest of the machine, except some forms of needles, is permanent in its nature and will last indefinitely for years, but the record may last for but a few minutes or a few days, depending upon the material of which it is composed and the number of times that it is used for the reproduction of sound therefrom. The needle used for contact with the sound-record in the reproduction of sound is usually made of steel and has a sharp point. This needle fits into the record-groove and is vibrated and propelled by the record-groove. The result is that the needle wears upon the record and it is intended and it is essential for the enjoyment and use of the machine that the record shall constantly be renewed. Complainants sell their machines embodying the invention of claims 5 and 35 of the patent in suit at prices ranging, according to their statement of June
63 1, 1906, from $17 to $100 each; while they sell their records, according to the same statement, at prices ranging from 35 cents to $5 each. If the purchaser had not the right to replace the temporary part, the record, which it is intended he shall replace, he would pay from $17 to $100 for a machine which would reproduce for him but a single record for which he may have paid only 35 cents. Therefore, as shown in the moving papers, it has been the custom of complainants and their licensees to sell sound-records in order to replace the sound-records sold with the machine and worn out or destroyed by use or accident. The machines are so constructed that the record can be placed upon it or removed therefrom simply by placing the record upon or taking the record off the flat disc turn-table.

From tests which I have made and which have been made by others within my knowledge, as well as from my large experience in manufacture, I know that disc sound-records having lateral undulations such as defendant's and complainants' sound-records in-

tended for use upon complainants' machines embodying claims 5 and 35 of the patent in suit can be used for the reproduction of sound but a very limited number of times. Unless the material of which the tablet is composed is unusually perfect the record cannot be successfully played more than twenty-five or thirty times before it has to be renewed. Often a single reproduction or two or three reproductions will destroy the record because of the quality of the material or because of the conditions under which the needle acts when following the record-groove. Frequently a record becomes useless after being played for ten or twelve times. In exceptional cases a record can be played more than thirty times and as often as fifty or sixty times. It takes but a minute or two to play a record, and the same record can be played many times within one-half hour, a sufficient number of times to destroy it, wear it out and render it useless.

64 The records, moreover, are fragile in their nature and are often broken in transportation, or by falling or other cause. Inexperienced users frequently scratch the record across the spiral lines and otherwise through lack of proper adjustment of the needle to the record-groove, and in this manner and in other ways the records are destroyed in large quantities. Another reason why the record is intended to be but a temporary part of the machine is that after the record has been played several times it becomes tiresome.

After a single playing of the record the deterioration of the record appears. Complainants' records, after a few playings, become gray in appearance along the record groove, showing that the friction of the needle has chipped off the edges, cut into the smooth finish of the surface, and otherwise worn out the material. The deterioration rapidly increases the oftener the record is played, until soon the record is useless. Records made by complainants' licensees, the American Graphophone Company, ordinarily cannot successfully be reproduced more than twelve or fifteen times, and the same is true of similar records made by the American Record Company. Hence, one of the problems in the record-making art is to secure a material so perfect that it will withstand the friction of the needle a greater number of times. At the present time and heretofore sound-records such as those in suit have been made by different manufacturers, including complainants and defendant, and complainants' licensees and the others mentioned of substantially the same material, all having the qualities and defects above specified by reason of which and for the other reasons stated the record is essentially a very temporary part of the machine and is intended constantly to be replaced.

During the pendency of this suit and upon the affirmance of the order for preliminary injunction by the Circuit Court of Ap-

65 peals defendant acted under the advice of its counsel, Louis Hicks, Esq., with reference to defendant's rights and duties; and defendant has throughout acted in accordance with what it and its officers under such legal advice have believed to be the rights and duties of the defendant in the premises. Defendant and its officers have been advised by said counsel and have verily believed that the preliminary injunction issued and served herein does not enjoin or restrain defendant from the manufacture of sound-records of any

description whatever; that no sound-record is covered by any claim of the patent in suit; that disc sound-records having lateral undulations, being useful for the reproduction of sound on mechanical feed-device machines which are not covered by claims 5 and 35 of the patent in suit, can be manufactured and used by defendant on such machines, and can be sold for use on such machines, and can be exported and sold for export to foreign countries by defendant; and that purchasers of machines from complainants and complainants' licensees embodying the invention of claims 5 and 35 of the patent in suit have a legal right to replace the sound-records forming part of the combination thereof, and for such purpose to purchase suitable sound-records from any manufacturer other than complainants and their licensees. Defendant and its officers have been advised by said counsel that it cannot manufacture, use or sell infringing machines; that it cannot sell sound-records to be used to complete an infringing machine; and that it cannot do any act which, taken in connection with the act of another person not acting under the authority of complainants, would constitute an infringing act. Defendants never did, and have not since the injunction, manufactured infringing machines, nor have defendants since the affirmance of the order by the Circuit Court of Appeals,

66 sold or used an infringing machine, nor has defendant since said affirmance sold any one record to be used upon or in connection with an infringing machine, nor has defendant done any act since said affirm*m*ance or since the issue of the preliminary injunction herein which has in any way contributed to an infringement of claim 5 or claim 35 of the patent in suit, or which has in any way violated or disregarded the said preliminary injunction. Defendant has, as above shown, so regulated its business as to take all necessary precautions against even an inadvertent violation of said preliminary injunction and has strictly confined its business and its acts to those things which, under the advice of counsel, it has verily believed it has had, and still has, the right to do.

In the affidavit of Albert Platz it is said:

"Upon my request they got out my letter of November 4th in which I ordered the said two dozen records."

Platz sent no letter dated November 4th in which he ordered any records. Platz's letter of November 4th annexed to the moving papers contains no order for records. I annex hereto a copy of Platz's letter of November 14, in which he ordered records, no copy of which is set forth in the moving papers.

Judge Hazel in his opinion in the prior suit said:

"The broad claims in suit, in my judgment, cannot be restricted to a record of even depth, such as described in the specification."

Records of even depth are those having only lateral undulations.

Hence, according to Judge Hazel and according to the fact, machines made according to the invention embodied in claims

67 5 and 35 of the patent in suit can be used with sound-records having vertical undulations, I have myself operated such a machine for the reproduction of cylindrical sound-records having vertical undulations. The machine had a swinging-arm carrying a

stylus at the free end which was vibrated and propelled across the surface of the record by the groove of the record. I saw a half a dozen such machines in successful operation at 81 Franklin street, New York City, on January 19, 1906, with defendant's counsel, Mr. Hicks. The machines were exhibited to me by Mr. Nye, who wished to arrange with the Leeds & Catlin Company for the manufacture of cylindrical phonograph records for use therewith, the records to have vertical undulations similar to the ones then and there used with perfect success. I am informed and believe that the Jacot Music Company of 39 Union square, New York City, has a similar machine for use with similar records. It would, therefore, be as reasonable to say that all cylindrical or disc records having vertical undulations are designed for use only on machines constructed according to claims 5 and 35 of the patent in suit, as to say that defendant's sound-records are intended for use and are capable of use only upon such machines. The fact is that sound-records of every description antedate the invention of the patent in suit and were known and used on various machines, especially feed device machines, prior to the invention of the patent in suit.

There is to-day in the United States the greatest activity in the devising of machines and records for the recording and reproducing of sound. Hardly a day passes without some intimation coming to me of some new machine not constructed according to the invention of claims 5 and 35 of the patent in suit and designed for use with defendant's sound-records. I annex hereto a letter addressed to the Leeds & Catlin Company, dated November 21, 1905, offering
68 to the Leeds & Catlin Company a new machine of the character referred to. I omit the name of the writer, who is an attorney, because I do not believe that it would be co-rteous to give his name, but I annex the body of his letter.

EDWARD F. LEEDS.

Subscribed and sworn to before me this 28th day of November, 1906.

[NOTARY'S SEAL.] HARRY C. ADAMS,
Notary Public, New York Co.

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(No Model.)

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3 Sheets—Sheet 1.

J. W. JONES.

SOUND REPRODUCING MACHINE.

No. 604,829. Patented May 31, 1898.

FIG. 1.

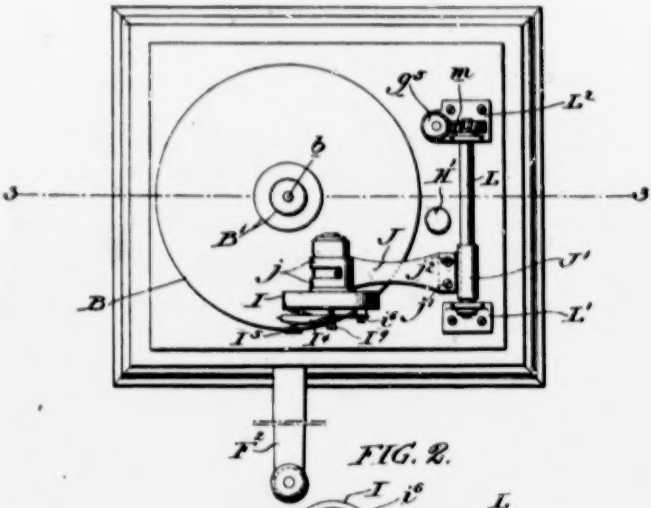
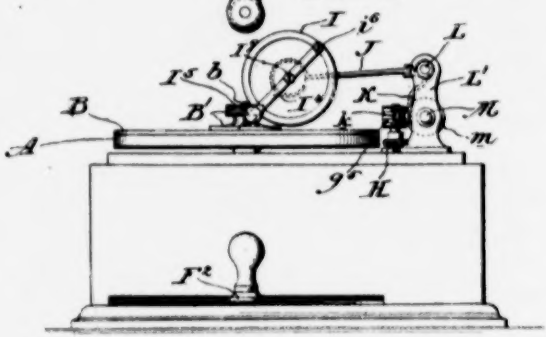


FIG. 2.



WITNESSES

John T. Wolan

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INVENTOR

Joseph W. Jones

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70 42

(No Model.) 3 Sheets—Sheet 2.

J. W. JONES.

SOUND REPRODUCING MACHINE.

No. 604,829 Patented May 31, 1898.

FIG. 3.

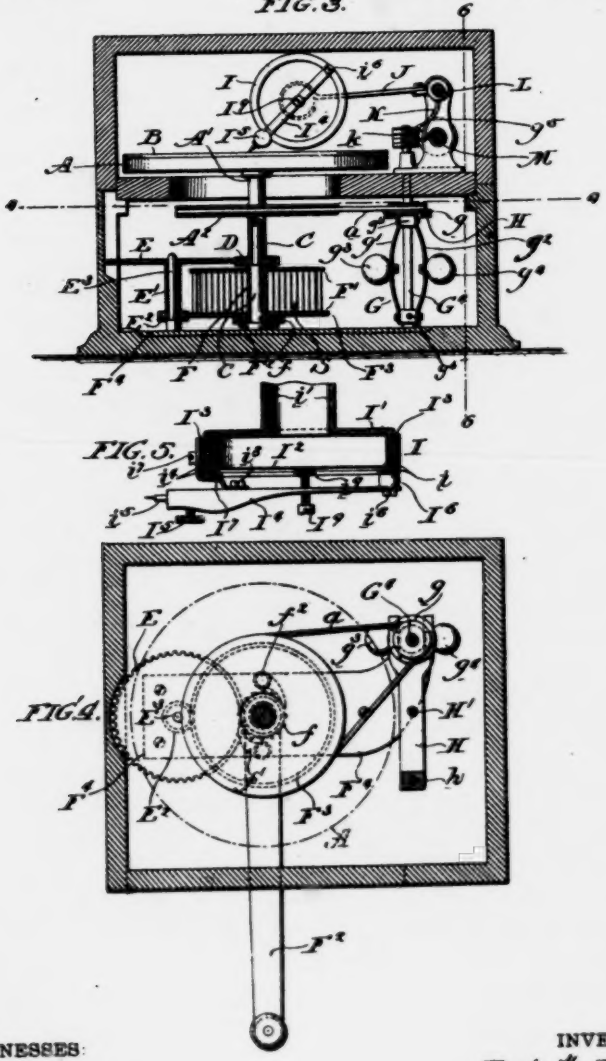

FIG. 5.

FIG. 4.

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Joseph W. Jones

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Attorney

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(No Model.)

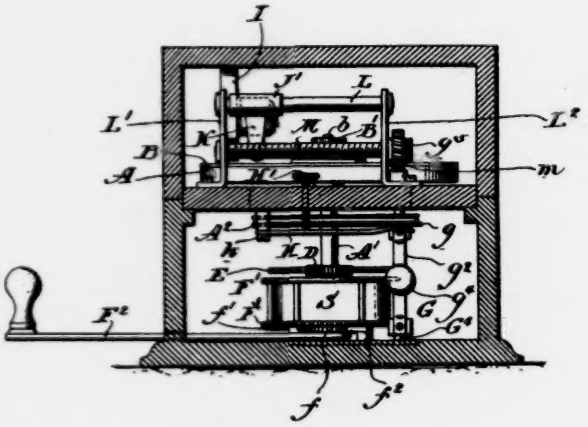
3 Sheets—Sheet 3.

J. W. JONES.

SOUND REPRODUCING MACHINE.

No. 604,829. Patented May 31, 1898.

FIG. 6.



WITNESSES

A. V. Groupe

INVENTOR

Joseph W. Jones

by David G. Underwood & Co

Attorneys.

UNITED STATES PATENT OFFICE.

JOSEPH W. JONES, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO HIMSELF AND JOSEPH A. VINCENT, OF SAME PLACE.

SOUND-REPRODUCING MACHINE.

SPECIFICATION forming part of Letters Patent No. 604,829, dated May 31, 1898.

Application filed July 23, 1897. Serial No. 645,750. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH W. JONES, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Sound-Reproducing Machines; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to improvements in the reproducing apparatus adapted for use in the method of recording and reproducing sounds as carried out in that class of instruments known as "gramophones."

In this class of apparatus the record is produced on the face of a disk as a volute band consisting of a sinuous or undulating groove of even depth. In the production of the record a recording-stylus is caused to travel in a straight radial path from the circumference toward the center. The reproduction of the recorded sounds is effected by giving to a reproducing-stylus a vibratory movement by and in accordance with the sinuosities of the record-groove, and these vibratory movements being transmitted to a diaphragm vibrations of the latter give rise to sounds which are reproductions of the sounds originally produced in the recording apparatus.

In all reproducing apparatus of the above type, as far as I am aware, a long arm has been employed to support the sound-box and stylus, and where it has been desired to intensify the sound a horn in like manner has thereby been supported and carried, the movement imparted to the arm sound-box and horn being effected by the delicate groove of the record working in conjunction with the stylus. It frequently happens that the sinuosities of the record leave very delicate partition-lines between the volutes of said record so that after several reproductions the grooves are caused to run together by the friction of the stylus, thus preventing a complete and perfect reproduction of the sound-waves recorded upon the record.

One of the main features of my invention, therefore, has reference to the means for positively conveying the sound-box and stylus along with the parts connected thereto across the face of the record-disk at a uniform speed with the travel of the stylus.

Another feature of my invention is the construction of the sound-box and means for regulating the quality of sound thereby produced.

My invention further embodies the construction and arrangement of various parts of the apparatus, all of which will be more fully explained hereinafter.

In reference to the drawings accompanying this specification, Figure 1 represents a plan view of a device embodying my invention. Fig. 2 illustrates a front elevation of the same. Fig. 3 shows a sectional elevation on the line 3 3 of Fig. 1. Fig. 4 represents a sectional plan view on the line 4 4 of Fig. 3. Fig. 5 illustrates an enlarged sectional view of the sound-box diaphragm and stylus, and Fig. 6 illustrates a section on the line 6 6 of Fig. 3.

A represents a rotating table which I prefer to make of sufficient weight to act as a balance-wheel, so that in conjunction with the governor the table will have a tendency to more regularly rotate.

Upon the table A is placed the disk B, containing the record, the same having an opening in the center adapted to a threaded stem *b*, which projects from the top of the table A, the record-disk being held in place by a thumb-screw B', which engages the threaded stem *b*. The table A is secured to a vertical shaft A', which carries a pulley A^2, which through the medium of the belt *a* and pulley *g* imparts a rotary motion to the governor G.

The lower end of the shaft A' is hollowed out to receive a stationary vertical shaft C, by which the shaft and table are supported, and upon the lower end of the shaft A' is a pinion D, which meshes with a spur-wheel E, secured to a sleeve E', to which in like manner is fastened at the lower end thereof a pinion E^2, all of which are supported upon the stationary vertical shaft E^3.

Surrounding the stationary vertical shaft C is a sleeve F, which supports the spring-drum F' and to which the inner end of the spring S is secured.

The sleeve F is provided at the lower end

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with ratchet-wheel f, operated by a pawl f', which is pivoted to the winding-lever F^2. The lower side of the spring-drum F' is provided with a spur-wheel F^3, forming a part of the spring-drum, and said spur-wheel meshing with the pinion E^2 imparts motion thereto from the spring S, the outer end of which is secured to said drum.

To the base-plate F^4 is pivotally secured a retaining-pawl f^2, which engages with the ratchet-wheel f to lock the latter in position during the winding of the spring.

The mechanism for causing the sound-box and stylus to travel across the face of the record is driven from the governor-shaft, in order to impart a positive and more regular motion to the stylus.

The vertical shaft G^1, which is driven by the pulley g, has a lower bearing in the plate F^4 and an upper bearing in one of the brackets supporting the bar carrying the sound-box.

The governor itself, which is of very ordinary type, comprises two steel springs g' and g^2, to which are secured the weights g^3 and g^4. At the lower end of the governor said springs are secured to a block g^5, which in turn is fixed to the shaft. The opposite ends of the springs are secured to a movable block g^6, to which is secured the pulley g.

On the under side of the upper portion of the cover of the machine is a leaf-spring H, having forked ends capable of being adjusted with respect to the pulley g. The leaf-spring is pivoted at a point h, and at or near the center is an adjusting-screw by which the pressure of the spring upon the pulley g and consequent speed of the machine can be regulated.

The sound-box I is carried by a short arm J, having a spring portion j, which encircles the reduced end of the sound-box and holds the same firmly in position.

The arm J is connected to a sleeve J' by means of screws j' and j^2, the former acting as a fulcrum-point, while the latter is adapted to a slot in said arm, the object of this arrangement being to allow for any irregularity which may exist between the feed imparted to the stylus by the groove of the record and that given to the arm J by the mechanism acting upon the same.

The sleeve J' is mounted upon a horizontal bar L, which is supported at opposite ends by brackets L' and L^2, and in like manner said brackets form supports for the screw M.

Depending from the sleeve J' is an arm K, provided with a screw k, tapered at the end to engage the thread of the screw M, by which the sound-box is fed in one direction across the face of the record-disk, motion being imparted to said screw from the shaft G^4 by the worm g^7, mounted thereon, and worm-wheel m, secured to the end of the screw-shaft.

One of the features of my present invention is the sound-box I, which has been designed to overcome harsh and grating sounds emitted by reproducing-diaphragms and to further reduce the loudness of the sound, which cannot be received with comfort by the listener.

In the present construction the sound-box I comprises a casing or body portion I', provided with a reduced portion i', through which the sound-waves are conducted.

The diaphragm I^2 is secured to the body portion by a ring I^3, and on opposite sides of the diaphragm between the ring and casing are soft-rubber washers i^4.

The stylus-lever I^4 has a heavy rigid portion to which the stylus i^5 is secured by a thumb-screw I^5, and a spring portion which is secured to the ring of the sound-box by a screw i^6, there being a buffer I^6 interposed between the stylus lever and ring of the sound-box.

A delicate steel spring I^7 serves to fulcrum the heavy end of the stylus-lever to the ring of the sound-box, the same being secured to the respective parts by screws i^7 and i^8.

The volume and quality of tone emitted from the sound-box is regulated by the set-screw I^8, which is threaded to the stylus-lever at the center and bears against a buffer i^9, fastened to the diaphragm, preferably formed of rubber.

Having now described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a sound-reproducing machine a record-disk, suitably supported and rotated, a sound-box provided with a diaphragm and stylus, the latter being adapted to the record, a lever secured to the sound-box and hinged to a sleeved portion or carrier which is guided upon a horizontal bar, said lever being hinged in such a manner as to allow a slight movement of the sound-box and stylus independent of the motion imparted by the feed mechanism, the sleeved portion or carrier having a depending portion adapted to a feed-screw, the horizontal bar for guiding said carrier, the feed-screw arranged below the horizontal bar, a worm-wheel on said screw, and a worm driven from the source of power to impart motion to the worm-wheel.

2. A feed-motion for a sound-reproducing machine comprising a horizontal bar, a carrier mounted thereon having a depending portion engaging a feed-screw, the feed-screw, means as shown for imparting motion thereto, a sound-box provided with a diaphragm and stylus, the latter being adapted to a sound-record, and an arm secured to the sound-box and hinged to the carriage in such a manner as to allow a slight movement of the sound-box and stylus independent of the movement imparted thereto by the feed-screw.

3. A sound-reproducing machine consisting of a record-disk suitably supported and rotated, a sound-box provided with a diaphragm, a stylus-lever extending across the face of the diaphragm, having a rigid portion fulcrumed by a spring to the sound-box and a flexible portion secured by a screw to the sound-box, an adjusting-screw located at or

near the center of the stylus-lever, one end of which is in contact with the diaphragm, a sound-box lever hinged and guided upon a horizontal bar, said lever having a depending portion provided with a screw-thread, a screw for engaging the threaded depending portion of said lever, a worm-wheel upon the end of said screw, and a worm driven from the source of power for operating said worm-wheel.

4. A sound-box for a sound-reproducing machine, consisting of a diaphragm mounted in a box or casing, a stylus-lever having a rigid portion hinged to the box or casing by a thin leaf-spring, and a flexible portion united through the medium of a rubber cushion to the box or casing, and an adjustable set-screw threaded to the stylus-lever at or near the center thereof, adapted to engage a buffer secured to the center of the diaphragm.

5. In a sound-reproducing machine, a sound-box comprising a shell or casing provided with a diaphragm and stylus-lever, the latter passing diametrically across the face of the diaphragm, and having a rigid portion connected to the sound-box by a spring, and a flexible portion pivoted at the opposite side and provided with a buffer, and an adjusting-screw adapted to the center of the stylus-lever and bearing against the diaphragm, substantially as specified.

6. In a sound-reproducing machine a sound-box provided with a diaphragm and securing-ring, a stylus-lever extending across the face of the diaphragm having a rigid portion fulcrumed by a spring to the securing-ring and a flexible portion formed integral therewith and secured to said ring by a screw and an adjusting-screw passing through the stylus-lever and acting upon a buffer fixed to the center of the diaphragm, substantially as specified.

7. In a sound-reproducing machine, a sound-box provided with a diaphragm, a stylus-lever extending diametrically across the face of the diaphragm and having a rigid portion fulcrumed at one side of the sound-box and a flexible portion secured to the opposite side of the sound-box with an adjustable screw threaded to the stylus-lever at or near the center and adapted to press upon the diaphragm, substantially as specified.

8. In a sound-reproducing machine, a sound-box provided with a diaphragm and securing-ring, a stylus-lever, extending across the face of the diaphragm, having a thickened and rigid portion fulcrumed by a spring to the securing-ring and a flexible portion united by a yielding pivotal connection to the opposite side of the securing-ring with an adjustable screw passing through the stylus-lever and acting upon the diaphragm, substantially as specified.

9. In a sound-reproducing machine, a sound-box provided with a diaphragm and securing-ring, a stylus-lever extending diametrically across the face of the diaphragm, the same being thick and rigid at one end and thin and flexible at the other, a leaf-spring interposed between the rigid portion of the stylus-lever and the securing-ring, an elastic buffer interposed between the flexible end of the stylus-lever and the securing-ring with a screw for holding the same in position, and an adjusting-screw passing through the center of the stylus-lever and acting upon the diaphragm through the medium of an elastic buffer, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

JOSEPH W. JONES.

Witnesses:
GEO. W. REED,
DAVID S. WILLIAMS.

75 47

(No Model.) 2 Sheets—Sheet 1

M. L. DEERING.

GRAPHOPHONE.

No. 428,273. Patented May 20, 1890.

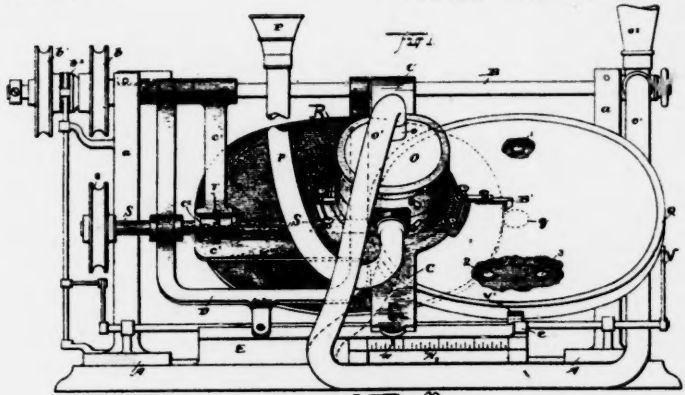

Fig 1.

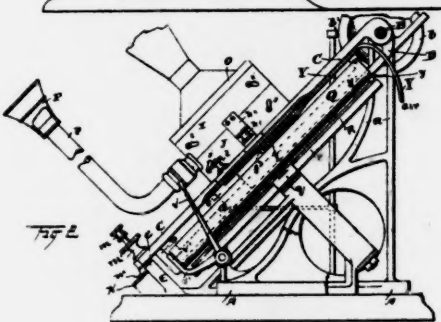

Fig 2.

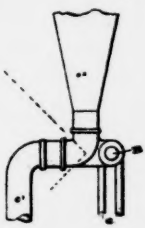

Fig 15.

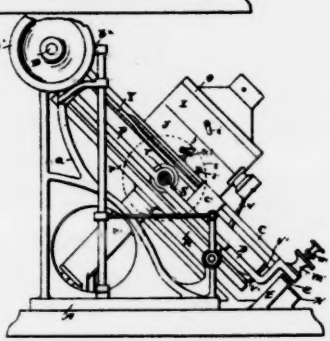

Fig 3.

WITNESSES.

H. S. Amstutz

William W. Dalin

INVENTOR.

M. L. Deering

By

W. T. Fisher

ATTORNEY

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(No Model.)

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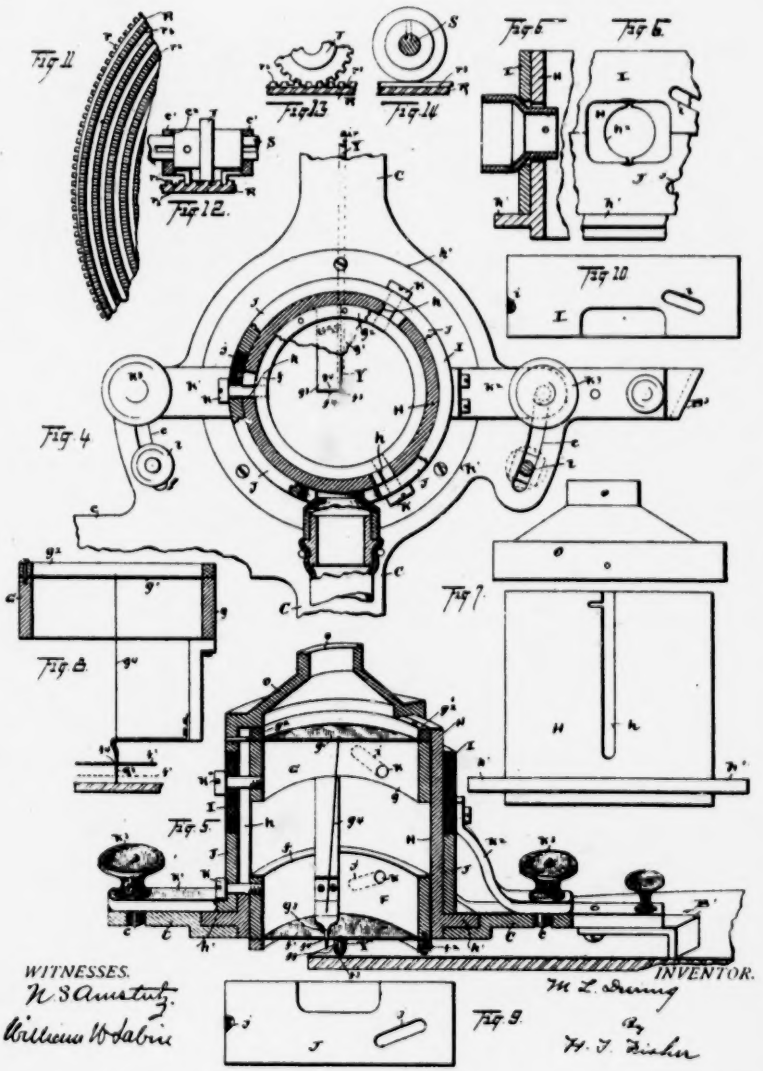
2 Sheets—Sheet 2.

M. L. DEERING.

GRAPHOPHONE.

No. 428,273. Patented May 20, 1890.



WITNESSES.

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William W. Dabin

INVENTOR.

M. L. Deering

By

H. T. Fisher

ATTORNEY.

UNITED STATES PATENT OFFICE.

MARK L. DEERING, OF CLEVELAND, OHIO.

GRAPHOPHONE.

SPECIFICATION forming part of Letters Patent No. 428,273, dated May 20, 1890.

Application filed December 20, 1886. Serial No. 204,210. (No model.)

To all whom it may concern:

Be it known that I, MARK L. DEERING, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Graphophones; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

The invention relates to improvements in graphophones, and has for its object to simplify the construction of graphophones, and to render them more practicable and convenient for every-day use, as well as to enhance their efficiency in the recording and reproduction of vocal and other sounds.

The invention consists in the construction of parts, as hereinafter described, and fully pointed out in the claims.

In the accompanying drawings, Figure 1 is a front elevation of the machine. Fig. 2 is an end view looking from the right of Fig. 1, and Fig. 3 an end view looking from the left of Fig. 1. Fig. 4 is a horizontal section of the diaphragm-supporting mechanism, taken on line *x x*, Fig. 2, and shown on an enlarged scale. Fig. 5 is a vertical section of the recording and reproducing mechanism and showing the means for adjusting the same with respect to the tablet. Fig. 6 is a sectional view showing the attachment of the speaking-tube or mouth-piece to the inner cylindrical support, upon which the recorder and the reproducer, respectively, are mounted, said cylinder being shown in elevation in Fig. 7 with its cap removed and seen above said figure. Fig. 8 is a vertical section of the reproducer, showing one form of style and the manner of connecting same and diaphragm. Figs. 9 and 10, respectively, are elevations of the rings upon the outside of the main supporting-cylinder for controlling the recording and reproducing rings upon the inside of said cylinder or tube. Fig. 11 is a face view of a section of the driving disk or wheel. Fig. 12 is a sectional elevation of the driving-pinion, showing the guide-fingers therefor arranged to travel in the spiral grooves of the drive-wheel; also showing slot in the drive-shaft to guide the pinion longitudinally thereon. Fig. 13 is a side view of a section of the driving-pinion and of the spirally-cut drive-wheel. Fig. 14 shows a drive pinion or wheel having a frictional contact with a section of the drive-wheel, and substituting the gear shown in the other figures. Fig. 15 is a detached end view of the trumpet, shown here as connected with the main frame.

A represents a supporting or main frame, which may be of any suitable design or construction. As here shown, said frame has two end standards *a a*, upon which is fixed a rod or bar B, having one end formed into a spindle to carry the pulleys *b b'*. This rod is fixed rigidly in the standards *a a*, and forms a support for the upper end of the arm C and the yoke-shaped frame D. The yoke D is adapted to rise in vertical lines on said bar, but does not move laterally, while the arm C both pivots and slides on the rod. At their lower ends both the yoke and arm are supported on the foot-bar E.

A specially novel feature of my invention is the arrangement and combination of the recorder F and reproducer G on a single arm, one above or over the other, so that when it is desired to change the machine from one use or function to another it is not necessary to make any attachment or detachment of said parts, but all the parts necessary to the performance of either function are constantly in position and require but the slightest movement or adjustment to put the machine to work or to change or stop its operation. Hitherto in all the machines with which I am acquainted the recorder and reproducer were entirely separate and distinct parts, one or the other of which was either wholly detached from the machine or swung away from the tablet when the other was at work, so that to make a change in the operation both parts had to be handled and their positions exchanged before the conversion of the machine to either reproduce or record was effected. This objection and manifest inconvenience I wholly avoid by employing a single arm which carries both recorder and reproducer in practically stationary position, and so arranged that by a slight raising or lowering of each the necessary change in position is accomplished, and either may be set to work at will. The special mechanism by which these re-

sults are worked out in the machine here shown is as follows: A single arm C, free to turn and slide on the rod or bar B, is employed, and on this arm I attach the recorder and the reproducer, one over or above the other. These consist, respectively, in rings *f g*, having diaphragms *f' g'*, secured in position by small rings f^2 g^2, and having styles or points f^3 g^3. In these particulars the recorder and reproducer are practically alike, and the parts interchangeable for convenience of manufacture and use.

H represents a cylinder or tube which has three vertical slots *h* open at the top, and a lateral flange *h'* at the bottom, which rests in a corresponding depression in the arm C, and through which it is secured to said arm.

Upon the outside of the cylinder H are two adjusting-rings I J, one for the recorder and the other for the reproducer, and each provided with three diagonal slots *i j*, respectively, and corresponding to the open slots *h*. The rings F G are held in position by screw-slots *k*, which pass through the aforesaid slots *i j h* into the said rings F G. Then to adjust the said rings, and thereby raise or lower either the recorder or the reproducer, I provide each outer ring I J with a lever or handle k' k^2, respectively, each of which has a thumb-nut k^3 working in a segmental slot *c* in the main arm C. In operation this construction will be found very easy and convenient. If a record is to be made, the upper style is carried away from the tablet by turning the ring I by its lever k^2, the said ring raising the bolts *k*, extending therethrough into the ring G, and causing said bolts and the ring G to move up through slots *h* in a corresponding degree. A corresponding movement of the lever k' in the opposite direction lowers the recorder to working position, and the thumb-nuts k^3 in each case serve to fasten said levers when adjustment is made. Each movement is the work of but an instant and requires no strength or effort to perform. As a further convenience, after having ascertained the exact position to which each lever k' k^2 should be moved to get the best effects, both in recording and reproducing, the style-points in each case being down on the tablet for this purpose, I provide adjusting set-nuts *l l'* in the slots *c*, which are fixed to serve as stops for the movement of the said levers k' k^2. These being set in the right places, the levers can be moved and the parts brought into the best working position as the exchange is made from recording to reproducing, or vice versa, without any special care by the operator or liability to get wrong. It will be observed that each of these parts has its own distinct mechanism for setting and for operation, while the construction and the operation in both are similar, thus lending simplicity thereto and leaving little to be learned, and avoiding complication and liability to err in the manipulation of the machine. It may be more definitely stated that both the recorder and the reproducer move only in vertical lines governed by the slots *h*, while the outside rings move rotarily according to the slots therein. A further adjustment of the arm C, which affects both the recorder and the reproducer alike, is provided by a thumb-nut *m*, which extends through the lower extremity of said arm and bears on the foot-bar E. Raising or lowering said arm by means of this nut will give more or less depth of penetration to both of the styles. A lock-nut *m'* secures the thumb-nut *m* when adjustment has been made.

It will be seen that the style f^3 of the recorder is set centrally in its diaphragm, and that by its side is a perforation f^4, through which extends the style f^3 of the reproducing-diaphragm. I have found that this perforation can be made without in any way endangering or impairing the efficiency of the recording-diaphragm, and in that fact found a solution of the problem of setting one part above the other and reaching the tablet with both styles in permanent position at about the same point upon its surface. In operation either style not in use need only be sufficiently withdrawn to avoid the surface of the tablet, and one or the other is always out of working position. As here shown, the two styles are side by side laterally to the operator and have a space between them corresponding, say, to one or more spaces on the scale N, so that either may be placed exactly into the position of the other and their positions exchanged by making the adjustments above described and moving the arm the required number of points to right or left. It will be seen that by reason of having both parts on the same arm, in the same support, and under the same mechanical conditions throughout, the two points will unerringly find exactly the same position on the tablet and the reproducer take the track of the recorder with the utmost precision. Such precision is essential to clearness and accuracy of reproduction and is much more difficult to obtain where the recorder and reproducer are on interchangeable arms and are otherwise wholly independent parts. As here shown, the reproducing-style is attached to the ring G, and has a silken or other cord g^4, by which it is connected with its diaphragm. Any suitable construction of these parts may be used.

O is a cap which covers the tube H, and has an opening *o* in its top, through which the reproduced sound may be taken either directly or by attaching a trumpet or tube *o'* thereto or otherwise, as may be desired.

P is a mouth-piece, through which the sound is imparted to the recorder, and is secured to the tube H by bayonet-like connection or in any suitable way. The rings I J are cut away sufficiently, as seen in Fig. 7, to allow the necessary adjustment without obstruction by said piece.

Q is a disk-shaped tablet-holder mounted in a suitable bearing in the main frame of the

machine, and provided with a pinion q about its spindle on the under side. Meshing with this pinion is a drive-wheel R, having gear r on its periphery for this purpose. This wheel likewise is disk-shaped or flat on its upper surface, and is supported in a suitable bearing r' in the main frame or attached thereto. Upon the surface of this wheel is cut a spiral gear r^2, running from periphery to the center, and between the lines of the gear is a groove or open space r^3.

S is the drive-shaft supported in bearings on the yoke D, which yoke is free to swing vertically on the rod B, but prevented from lateral movement on said rod by any suitable means. A lateral arm c', rigid with the arm C, has a bearing at its end on the rod B and a recess c^2, in which is located a wheel or pinion T. This pinion has a hub through which it is sleeved on the drive-shaft S, and is so connected therewith by a spline that it will turn with the said shaft when it is turned, but at the same time is free to slide longitudinally thereon, and thus travel inward or outward on the wheel R, over the spiral gear, with which it is arranged to mesh and operate.

Power is applied by band from pulley b to pulley s, and the machine may be promptly stopped or started by means of a lever V, connecting with the clutch b^2, which engages the pulley b. A friction-brake v' is provided for bearing on the tablet-holder at the same time that the clutch is thrown out, so that the tablet-holder will not move from momentum after the power is thrown off, but stops instantly when the change is made. The said brake v' and the lever V are connected for conjoint action, thus locking and unlocking the tablet with each movement of clutch. Obviously this is only one of many ways in which the machine could be stopped and started, and the brake might be applied to the drive-wheel or other part of the moving mechanism.

It should have been stated that the shaft S passes freely through openings in the arms c' at either side of pinion T, so that through and by means of said shaft the arms C c' and the yoke D are so connected that one cannot be raised without also raising the other. This does not, however, interfere with the free lateral sliding movement of the arm C c' and its attached parts independently of the yoke D, as is necessary when the machine is at work and when either style or point is to be changed with respect to positions on the tablet.

From the foregoing description the operation of the tablet-holder through the propelling mechanism will be clear. The speed of the tablet-holder as compared with the speed of the drive-wheel will depend on the size of pinion q. As here shown, the relative sizes are such that the tablet is given about ten revolutions to one of the drive-wheel. Of course the record on the tablet-holder will run in spiral lines, for the reason that the style-point is fed inward toward the center gradually through the wheel T and the arm C; but these lines will be as ten to one of the spiral gear on the drive-wheel, thus making a very compact record and getting a great number of words into a small space. A more or less compact record can be made by using larger or smaller pinions q, and interchangeable pinions can be kept for this purpose.

The relative positions of the parts are easily and accurately determined. Suppose, for example, that it is desired to start a record—say half-way in—on the tablet. It is only necessary to carry arm C to the middle of scale E and place the pointer w over said middle line. This movement carries the wheel T inward toward the center of the drive-wheel to a position corresponding exactly to the position of the recording-style on the tablet. A movement bodily of the parts to any other position would have the same effect, and exact correspondence of position would be maintained between wheel T on the drive-wheel and the style-point on the tablet, and there is no movement, adjustment, or change which could make any difference in this particular.

Any suitable governor may be employed to give regularity and uniformity of speed to the actuating mechanism.

The machine as herein shown and described has a disk-shaped drive-wheel with spiral gear on its flat face. The shape or form of the said wheel is not material, provided it have spiral contact thereon which will mesh with a traveling pinion or other suitable wheel.

To deaden the sound of the machinery, I cover the backs of the drive-wheel and the tablet-holder with a coating of non-conducting material y. For this purpose paper pasted thereon with shellac serves very well, though any other suitable covering may be employed.

I do not wish to regard the invention as restricted to a disk-shaped tablet-holder, as obviously a cylindrical tablet would work as well with this machine.

In Fig. 1 I show three irregularly-set pins or studs 1 2 3 on the surface of the tablet-holder, with which three corresponding openings in the bottom of the tablet register. As all the tablet-holders and tablets will be made exactly alike in these particulars, there can be no mistakes made in placing the tablet in position, the irregular pins and holes admitting of but one position of the parts, and that position always being right.

As seen in Fig. 5, a sound-chamber is formed between the two diaphragms, the only opening to which is the circular opening h^2 for the mouth-piece P, and in Fig. 1 I show a flexible tube p, connected with the piece P. While this piece P is termed the "mouth-piece" in contradistinction to the opening o in cap O, through which only reproduced sound is received, it should be understood that I really need only a single tube p, connected with piece P and leading to the chamber between the two diaphragms, to both record and

receive sounds, and having made a record by speaking into tube *p*, I can transfer it to the ear and receive back the same message. This is a great convenience as compared with those machines which require handling of two separate and distinct apparatus, which have to be exchanged every time a change is made from recording to receiving, or the other way. Yet I find the opening in cap O useful for various purposes of reproduction—for example, as when the sound is to be delivered to a group of persons in a room—and have shown in Fig. 1 a tube *o* connected therewith and provided with a flaring trumpet o^2, which may be adjusted on its support at the end of rod B to deliver in one direction or another according to pleasure; or this tube may be attached at its inner extremity to the so-called "mouth-piece" P, as shown by dotted lines in Fig. 1, and used to both record and receive, as is done with tube *p*. The tube *o* would ordinarily be provided with a large flaring trumpet adapted to catch the sounds of vocal or instrumental music, or of speech by a person standing at a distance, as when delivering an address, while the trumpet on the tube *p* would be adapted more especially for use directly by the operator of the machine.

I have shown and described gear on the drive-wheel and its pinion or wheel for actuating the style-arm. Frictional or other positive contact could be employed between said wheels, and the gear thus be dispensed with; but gear-connection is deemed preferable.

Y is an air-tube connected with any suitable blower at its outer end and arranged with its inner end to deliver a steady stream of air under pressure upon the tablet about the style to blow away the scrapings produced by the style-point and to keep all the parts perfectly clean and clear. The same motor that runs the graphophone can run the blower, or they may be separately driven, according to convenience. A steady blast of air delivered about the recording-style when at work saves the trouble and annoyance of the operator blowing away the scrapings after the record is made, or, in fact, during its progress, for the reason that the style is liable to clog with accumulations in front of it unless frequent blowing is resorted to as it passes over the tablet.

On the bar E, I form an incline *e* for the style-arm to ride upon when the arm is carried to the extreme of its movement toward the center of the tablet, and thus lift the style out of contact with the tablet and permit all the parts to move without making a record.

B is a turn-tool, shown here as supported upon the style-arm and serving to turn down the surface of the tablet when such service is required. The special location or position of this tool is not important.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a graphophone, a diaphragm having a style and a perforation, and a second diaphragm with a style extending through said perforation, substantially as set forth.

2. In a graphophone, a diaphragm to record sound and a diaphragm to reproduce sound, each adjustable in vertical lines on a common support, with a chamber between said diaphragms having an opening at its side, substantially as set forth.

3. In a graphophone, a recording-diaphragm and a reproducing-diaphragm, one above the other, the style of the upper diaphragm passing through the lower diaphragm, substantially as described.

4. In a graphophone, an arm carrying a recorder and a reproducer, a tablet, a wheel to move the arm across the tablet, and a drive-wheel having spiral contact with said wheel, by which said wheel is moved forward, substantially as set forth.

5. In a graphophone, a drive-wheel with a flat surface divided by spiral lines, a tablet, a style-supporting arm, and a wheel for moving said arm driven by contact with the drive-wheel, substantially as set forth.

6. In a graphophone, a tablet-holder and a drive-wheel in fixed bearings, a style-supporting arm, and a wheel to move said arm rotated and moved axially by the drive-wheel, substantially as set forth.

7. In a graphophone, a wheel with spiral gear, a shaft having a pinion or wheel free to turn and travel longitudinally on the shaft, a tablet, and an arm carrying recording and reproducing devices, substantially as set forth.

8. In a graphophone, a disk-shaped drive-wheel having a spiral gear and a spiral groove upon its face, and a wheel to move the style-arm meshing with said gear and carried forward by a guide in the groove, substantially as set forth.

9. In a graphophone, a drive-wheel having spiral gear upon its side and gear in its periphery, in combination with a wheel meshing with the spiral gear, a style-arm moved thereby, and a tablet-holder with a pinion meshing with the gear on the periphery of the drive-wheel, substantially as set forth.

10. In a graphophone, a recorder-diaphragm and a reproducer-diaphragm, one over the other, and provided with separate styles, and a single movable support for said parts, substantially as set forth.

11. In a graphophone, a recorder and a reproducer provided with diaphragms, and a movable support on which said diaphragms are held one above the other, substantially as set forth.

12. In a graphophone, separate recording and reproducing diaphragms having separate styles and a sound-chamber between them, and an opening to said chamber at the side, substantially as set forth.

13. In a graphophone, a recorder and a reproducer located one above the other on a common supporting-arm and having independently-adjustable diaphragms with styles attached, substantially as set forth.

14. In a graphophone, separate recording and reproducing diaphragms, a chamber between said diaphragms having a side opening, and a chamber above the outer diaphragm having an opening, substantially as set forth.

15. In a graphophone, a supporting-arm and separate recorders and reproducers on said arm, one above the other, and having separate styles, a tablet, and single adjusting mechanism to fix the elevation of the recorder and reproducer with respect to the tablet to increase or diminish the distance between said parts, substantially as set forth.

16. In a graphophone, a diaphragm with a style and a perforation at one side of the style, in combination with a superposed diaphragm having a style extending through said perforation, and a single arm supporting said parts, substantially as set forth.

17. In a graphophone, a tablet supported in stationary bearings, and an arm carrying two diaphragms, one over the other, and two style-points connected with said diaphragms, substantially as set forth.

18. In a graphophone, a tablet supported in stationary bearings, and an arm carrying a recorder and a reproducer having separate styles, situated substantially side by side and connected with different diaphragms, one above the other, substantially as set forth.

19. In a graphophone, a drive-wheel having a spirally-divided bearing-surface on its top, and a wheel to actuate the style-supporting arm working in contact with said spirally-divided surface and said style-supporting arm, substantially as set forth.

20. In a graphophone, a drive-shaft and a style-supporting arm and a wheel to move said arm on said shaft, in combination with a drive-wheel and a tablet, substantially as set forth.

21. In a graphophone, a drive-wheel with a flat surface having spiral gear cut thereon, a wheel meshing with the drive-wheel and moved longitudinally on its shaft by the drive-wheel, and a style-supporting arm moved by said wheel, substantially as set forth.

22. In a graphophone, a trumpet fixed adjustably upon the frame and a tube leading therefrom and adapted to be connected with the recorder and reproducer, respectively, in combination with a single arm having a recorder and a reproducer thereon, one above the other, substantially as set forth.

23. In a graphophone, a drive-wheel having a flat contact-surface, a tablet-holder having a wheel rigid therewith and in contact with the periphery of the said drive-wheel, an arm carrying a style, and a wheel to move said arm actuated by the surface of the drive-wheel, substantially as set forth.

24. In a graphophone, a drive-wheel having a spiral contact-surface on its side to impel the style-arm, in combination with the style-arm, a tablet-holder, and a pinion or wheel rigid therewith and driven by the drive-wheel, substantially as set forth.

In testimony whereof I hereunto set my hand this 18th day of December, 1888.

MARK L. DEERING.

Witnesses:
H. T. FISHER,
I. L. COREY.

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A RECORD SAVER AT LAST!

A NEW TALKING MACHINE!

With this new machine the life of a record is materially increased by the aid of its mechanical feed device, doing away with the old wearing of the record, by the fact that this feed device supports the arm and reproducer, taking away the weight heretofore supported by the record.

WE MANUFACTURE A FINE RECORD FOR USE ON THIS MACHINE.

LEEDS & CATLIN CO.,
53 East 11th st. New York.

This record is sold by the manufacturers upon condition that when sold by dealers to the public it must be sold at not less than the regular list price, and upon the further condition that the record shall be used for the reproduction of sound directly from the record; it is sold for use on mechanical feed machines. This record is made from the very finest material and can be played many times without deterioration.

A Wonderful Record Saver

A Marvelous Sound Reproducer is the New Taper Arm Talk-O-Phone Equipped with the Ingenious Mechanical Feed.

[CUT.]

Appreciating that the grating, grinding noises of all disc reproducing machines are obnoxious, we have been experimenting for the past year to perfect a **Talk-o-Phone** that would be entirely free from all foreign sounds and only reproduce the pure musical tones.

We found that the dragging of the needle in order to propel the reproducer across the record was the cause of all the trouble. To obviate this we invented the **Mechanical Feed,** a disc to propel the reproducer across the record, entirely independent of the needle.

The marvelous, clear reproductions resulting from this new device must be heard to be appreciated. This, too, is a great record saver for there is no chance to scratch the needle across the record.

It will be observed that the **new Talk-o-Phone** operated on this principle gets entirely away from the old fundamental principle of reproducing machines, namely, the needle feed. Our patents on this new device are very broad, and this arrangement cannot be used on another machine. We do not operate under any shop rights or license from anyone.

Dealers selling reproducing machines should write immediately for our full descriptive matter and for prices on the **new Talk-o-Phone.** If you are interested in supplying your customers with the only machine which brings out from disc records the pure musical tone only, you must have a sample of this **new Talk-o-Phone.**

THE TALK-O-PHONE COMPANY,
10 Skokie St., Toledo, O.

84 **Advertisement in the "Talking Machine News."**

PUBLISHED JUNE 1, 1906, IN LONDON, ENGLAND.

[CUT.]

Song for Song,
Band for Band,
Solo for Solo,

The

IMPERIAL
CONCERT
RECORD

is louder, clearer, sweeter, and in every way more satisfactory than any other disc at present on the market.

Can be obtained from all factors and dealers, or from the sole controllers.

RETAIL PRICE
2/6.

COOK'S ATHLETIC CO., LTD.,

Telephone 4431 Central. Beech Street House, Beech Street, London, E. C.

85 11/21/1906.

The Leeds & Catlin Company.

DEAR SIRS: Having noticed in the "Music Trades" that you have gone into the manufacture of talking machines, will say that I have a client, who has recently perfected some remarkable inventions in this line, which are entirely novel in operation and different from anything now on the market.

One of these inventions is an Electric Talking Machine in which the vibrations of the needle are directly transformed into electric vibrations. No diaphragm is attached to the needle, the diaphragm may be any distance from the needle and any number of diaphragms of any size may be actuated by one needle.

The horn does not follow the needle on the record and is not connected with it. No "tapering arm" or other arm is required, as the horn is rigidly attached to the cabinet, in fact the horn may be eliminated entirely, if desired.

The many advantages of this machine will readily occur to you. This machine has not yet been shown to any of the trade, having just been perfected, and if you want a talking machine better and different from anything on the market, we have it. My client would prefer to affiliate himself with some new organization, who would not be vitally interested in pushing same of the older devices on the market.

My client also has a patent on a flexible connection between the needle arm and the diaphragm by means of which the usual scratching sound is avoided and, which by means of a thumb screw, permits the music to be made loud or soft; and the same can be easily manipulated by any unskilled operator.

A very advantageous arrangement could be made with my client at this time, but prompt action is necessary. If you are
86 interested, an interview could be arranged for in —— and a reply from you will receive immediate and careful consideration.

Yours very truly, —— ——.

Albert Platz, Exclusive Dealer in Victor Machines & Records,
344 Devoe Street.

BROOKLYN, N. Y., *Nov.* 14, 1906.

Messrs. Leeds & Catline.

DEAR SIRS: Yo received, you can send me the following records, two of each.

45274—45260—45286—45289—45294—45299—
44911—44928—44864—45263—45264—45268.

Enclosed find money order covering same.
Kindly hurry this order as I have immediate use for them.

Yours Respectfully, ALBERT PLATZ,
344 *Devoe St., B'klyn, N. Y.*

87 Circuit Court of the United States, Southern District of New York. In Equity.

No. 8797.

VICTOR TALKING MACHINE COMPANY and UNITED STATES GRAMOPHONE COMPANY, Complainants,

vs.

LEEDS & CATLIN COMPANY, Defendant.

STATE AND COUNTY OF NEW YORK, *ss:*

Louis H. Bunker, being duly sworn, says:

I reside in the City of New York and have for several years past been actively engaged in the talking machine business. I have read the two affidavits of Charles K. Bennett and the affidavit of George M. Thompson upon complainants' motion to punish defendant, the Leeds & Catlin Company, for an alleged violation of the preliminary injunction issued in this action. I was present at the times of the sales of records by the defendant to said Bennett and Thompson, and the conversation which said Bennett and said Thompson state was had by them with an attendant or salesman at the establishment of the Leeds & Catlin Company took place with me. I am not and was not at the times of said alleged conversations an employee, servant or officer of the Leeds & Catlin Company. Being present at the time when said Bennett and said Thompson called at the place of business at the Leeds & Catlin Company, and being familiar with the business of the Leeds & Catlin Company and the sales of
88 their records, I undertook to wait upon said Bennett and Thompson as a friendly act, and entered into conversation with them. The said conversations, as stated in the said affidavits of Messrs. Bennett and Thompson are not correctly given. At the times of said conversations I informed Mr. Bennett and Mr. Thompson that the Leeds & —— Company had a mechanical feed-device machine and that the mechanical feed-device possessed the advantage of carrying the weight of the tapering-arm. Mr. Bennett did not inform me that he had a "Victor V" machine, nor did I tell Mr. Bennett that I had at my home a Victor Talking Machine on which I played similar records, the fact being that I did not have at my home or elsewhere a Victor Talking Machine, and have not possessed a Victor Talking Machine for the last year and a half. I explained to Messrs. Bennett and Thompson that the Leeds & Catlin mechanical feed-device machine had a new worm-gear motor containing one large spring only in addition to the mechanical feed-device, and that defendant's records could be played upon such mechanical feed-device machine and other suitable machines. Messrs. Bennett and Thompson did ask me whether the defendant's records could be used on machines of the manufacture of the Victor Talking Machine Company, and the foregoing was my answer. I was not speaking for the Leeds & Catlin Company, but was speaking in general conversation.

Mechanical feed-device machines for the reproduction of sound from flat disc records are very old in the art and are well known in the trade. I am familiar with the mechanical feed-device machine of the Talk-O-Phone Company, and in April, 1906, in the City of New York, I carefully inspected and examined the construction of the mechanical feed-device Talk-o-phone and as a result thereof, I am in a position to state that such machine was then a very perfect machine and capable of reproducing sound
89 from flat disc records having lateral undulations as perfectly as a machine not having a mechanical feed-device. Said mechanical feed-device Talk-o-phone was constructed, designed and intended for the reproduction of sound from flat disc sound-records having lateral undulations. Recently I have examined similar feed-device talk-o-phones at the place of business of the Leeds & Catlin Company, have heard the reproduction of sound by the use thereof from flat disc records having lateral undulations and know and therefore allege that such mechanical feed-device Talk-o-phones are capable of reproducing sound, and do actually reproduce sound as perfectly as sound reproducing machines not having mechanical feed-devices.

I am also familiar with the Disc-o-phone and Picture-phone, which is a modified Disc-o-phone showing pictures in connection with the reproduction of sound, of the Valiquet Novelty Company of Newark, N. J. I have visited the factory of the said Valiquet Novelty Company, and have been informed by the gentlemen of that company that they are prepared to manufacture disc talking machines operating by the aid of mechanical feed-devices for reproduction of sound from records having lateral undulations.

The record is a temporary part of all sound-reproducing machines, and this is especially true of sound-reproducing machines intended for the reproduction of sound from flat disc records having lateral undulations. Such machines employ a sharp steel needle which fits into the record-groove and soon wears out and destroys the record. A very few reproductions of sound from a record will in many cases render the record useless. Often from ten to fifteen reproductions will wear out and destroy the record. Ordinarily a record can be played for about twenty-five to thirty times, and in some cases, if the material of which the record is made is of exceptional character, the record can be played a great number
90 of times, but the record begins to wear out with the first playing thereof; hence such machines are so constructed that the records can constantly be replaced, and it is the practice to replace the record after one or two playings. The Victor Talking Machine Company has, to my knowledge, and so have its licensees, the American Graphophone Company and the Universal Talking Machine Company, sold sound-reproducing machines without mechanical feed-devices, such as those claimed by claims 5 and 35 of the patent in suit without any restriction whatever as to the records that may be used thereon for the reproduction of sound. The purchaser of such machines from the Victor Talking Machine Company and its said licensees has always understood that he was at

liberty to use the purchased machine for the reproduction of sound from any suitable record, and I have never heard any suggestion of any restriction made by complainants or its licensees with respect thereto. There are in use throughout the United States hundreds of thousands of such sound reproducing machines sold by the Victor Talking Machine Company and its said licensees together with sound-records to users or customers.

The statement contained in the affidavit of Kennedy that sound records such as defendant's sound-records "are incapable of use except in reproducing sound in the combination of claim 35 and in the method of claim 5 of the said patent, No. 534,543, in suit," is absolutely and unqualifiedly false. Defendant's sound-records are not only capable of use, but are intended for use, as above explained by me, on mechanical feed-device machines. I can understand this statement in Kennedy's said affidavit, and the incorrect and partial statement by Bennett and Thompson of their conversations with me only as attempts to mislead the Court in regard to the nature of flat disc sound-records and their capacity for use in the
91 reproduction of sound successfully and perfectly on machines of different construction, such as mechanical feed-device machines.

I have bought and sold on my own account talking machines and talking machine supplies, such as records, frequently advertising in the newspapers and otherwise for such purpose, and I have negotiated sales of the same on a commission basis. For the Leeds & Catlin Company I have negotiated sales of records only upon a commission basis, and in this way had become familiar with the sales of records by that company at the times when Messrs. Bennett and Thompson called at the place of business of the Leeds & Catlin Company and purchased the records referred to in their affidavits. I did not act in any way other than in a merely friendly way, as above stated. Such sales of Messrs. Bennett and Thompson were sales made by the Leeds & Catlin Company, and the part that I took therein was not as an employee or representative of the Leeds & Catlin Company, and I never received or requested any commission therefor. I merely happened to be present, acted as above stated, and entered into conversation with the gentlemen on each occasion, talking with them for myself and not under any instructions from the Leeds & Catlin Company, but expressing merely my knowledge of the talking machine art. I cannot understand why Messrs. Bennett and Thompson should incorrectly state the said conversations, or why they should omit the greater part of the substance of the conversations, which consisted in my very explicit explanation to them and to each of them of the mechanical feed-device machines of the Leeds & Catlin Company. At the times of said sales of Messrs. Bennett and Thompson I was not informed of the preliminary injunction issued in this suit against the Leeds & Catlin Com-
92 pany, not being employed thereby. I have not been employed by the Leeds & Catlin Company since prior to May 1, 1906.

LOUIS H. BUNKER.

Subscribed and sworn to before me this 28th day of November, 1906.

[NOTARY'S SEAL.] HARRY C. ADAMS,
Notary Public, New York Co.

Circuit Court of the United States, Southern District of New York.
In Equity.

No. 8797.

VICTOR TALKING MACHINE COMPANY and UNITED STATES GRAMOPHONE COMPANY, Complainants,
vs.
LEEDS & CATLIN COMPANY, Defendant.

STATE AND COUNTY OF NEW YORK, *ss:*

Loring L. Leeds, being duly sworn, says: I reside in the City of New York and have been engaged in the talking machine business for the greater part of the last ten years. I have had much experience in talking machines and supplies therefor, including disc and cylinder records. I have read the annexed affidavits of Edward F. Leeds, Louis H. Bunker and Leo Moeller and agree with their statements, with reference to the talking machine art. I have visited the place of business and factory of the Valiquet Novelty
93 Company at 50-58 Columbia street, Newark, N. J., and have inspected and examined the disc talking machines heretofore manufactured by that company. I have been informed by the officers of that company that they are prepared to manufacture and sell, and will manufacture for and sell to the Leeds & Catlin Company disc talking machines operating by mechanical feed-devices for the reproduction of sound from records having lateral undulations.

I have examined, inspected and operated the mechanical feed-device talk-o-phone which is designed and intended for the reproduction of sound from disc sound records having lateral undulations, such as defendant's sound records, by the aid of a mechanical feed device and such mechanical feed-device talk-o-phones all render a reproduction of sound from the record as perfect as the reproduction of sound therefrom by complainants' machines not provided with mechanical feed-devices. It is well known in the art that the phonograph and the graphophone in their original form employ disc sound-records and mechanical feed-devices and the early Berliner gramophone of the prior art also employed disc sound-records having lateral undulations and mechanical feed-devices, both for the recording of sound and for the reproduction of sound in precisely the same manner as in the earlier phonograph and graphophone, that is to say, the recording or reproducing stylus is fed by the aid of a feed-device so that its spirals pass successively beneath the recording or reproducing point. Such a Berliner gramophone is illustrated and described in the *Electrical World* for November 12, 1887. As

the phonograph and the graphophone have, from the time of the invention thereof, been operated by means of feed-screws and are still so operated, and as it is matter of common knowledge that millions of such phonographs and graphophones have been manufactured, sold, and put into use, it is self-evident that the reproduction of sound from sound-records by means of machines operating by means of feed-devices is the very basis of the art of the
94 recording and the reproducing of sound and has reached a high state of perfection and unprecedented success. The number of sound recording and sound reproducing machines in use to-day and employing mechanical feed-devices far exceeds the number of sound reproducing machines without mechanical feed-devices, and constructed according to claims 5 and 35 of the patent in suit. As the mechanical feed-device talk-o-phone and similarly feed-device disc machines and the Berliner gramophone, operating by means of a mechanical feed-device, are constructed upon exactly those principles for the reproduction of sound as the millions of phonographs and graphophones that have gone into use were constructed upon, it is clear that the allegations contained in the affidavits of Middleton, Haddon and Kennedy, to the effect that defendant's sound-records can only be intended for use upon and are incapable of use except upon machines embodying the combination of claim 35 and operating according to the method of claim 5 of patent No. 534,543 in suit, are false and are made to mislead the Court in an endeavor to create the false impression that defendant's sound-records have no other useful purpose than use upon sound reproducing machines made in accordance with the invention of the patent in suit.

Not only are defendant's sound-records intended for use, and capable of use in a high degree of perfection upon mechanical feed-device machines, but defendant's sound records are articles of commerce between the United States and foreign countries. To my knowledge thousands of defendant's sound-records have been sold by defendant for export to foreign countries, and have been exported by defendant to foreign countries.

It is the fact that cylindrical sound-records having vertical undulations or lateral undulations are capable of moving the reproducing stylus and sound-box of a phonograph or graphophone, or other similar machine across the face of the record, just as the disc
95 sound-records having lateral undulations cause the reproducing stylus or sound-box to move across the face of the record in machines embodying the invention of claims 5 and 35 of the patent in suit. Such machines are in existence to day, as explained in the annexed affidavit of Edward F. Leeds, and are well known to those familiar with the art, and the machines and records heretofore made, sold and used within the United States. There is, in fact, no difference whatever between cylindrical sound-records having vertical undulations and flat disc sound-records having lateral undulations so far as the capacity of each to reproduce sound is concerned, either by the aid of a mechanical feed-device causing the stylus to move across the face of the record, or by the propelling of the reproducing stylus and sound-box across the face of the record

by reason of the pressure exerted upon the stylus by the walls of the rotating record-groove. The contention that a cylindrical sound-record, having vertical undulations, can be intended only for use upon, and is capable of use only upon a machine having a stylus free to be vibrated and propelled across the face of the record by and in accordance with the record in accordance with the invention of the patent in suit is no more false than is the contention made in the moving affidavits that defendant's sound-records are intended for and are capable of only a similar use. Both kinds of records are capable of use upon all kinds of sound-reproducing machines. The fact that disc sound-records having lateral undulations are peculiarly adapted for the perfect reproduction of sound upon machines having mechanical feed devices appears from a consideration of the method according to which such sound-records are made. Such sound-records, like all other sound-records, are made and can only be made by means of recording machines operating by the aid of mechanical feed-devices. The very theory of the art is that sound shall first be recorded and then reproduced by copying in the reproduction
96 the method employed in the recording.

LORING L. LEEDS.

Subscribed and sworn to before me this 28th day of November, 1906.

HARRY C. ADAMS,
[NOTARY'S SEAL.] *Notary Public, New York Co.*

Circuit Court of the United States, Southern District of New York.
In Equity.

No. 8797.

VICTOR TALKING MACHINE COMPANY and UNITED STATES GRAMOPHONE COMPANY, Complainants,
vs.
LEEDS & CATLIN COMPANY, Defendant.

STATE AND COUNTY OF NEW YORK, *ss:*

Leo Moeller, being duly sworn, says:

I have been engaged in the talking machine business, especially in the manufacture of disc and other sound-records, for the past five years. I am employed by the Leeds & Catlin Company. I am familiar with sound recording and reproducing machines and records. To my knowledge that disc records having lateral undulations are intended for use and are capable of use upon sound reproducing machines operating by means of mechanical feed-devices and
97 not in accordance with claims 5 and 35 of the patent in suit.

All sound-records, whether disc or cylindrical, whether of lateral or vertical undulations, are recorded by means of machines the recording stylus of which is carried across the face of the recording surface of the tablet by means of a feed-screw or other feed-

device. It is a fundamental principle in the art with which I have long been familiar that a sound-record can most perfectly be used for the reproduction of sound upon the machine by means of which the sound-record was originally made, and, of course, any sound-record can be used for the reproduction of sound with perfect success upon a machine similar to the machine by means of which the sound was originally recorded. The Edison phonograph and the Bell & Tainter graphophone are machines which record and reproduce sound by the aid of mechanical feed-devices which carry the recording and reproducing stylus across the face of the tablet or record. The phonograph and the graphophone have had various forms of construction, and the very earliest forms of the phonograph and graphophone were forms which employed flat disc tablets and flat disc records for the recording and reproducing of sound, and feed-screws or similar feed devices for causing the recording or reproducing stylus to move across the face of the tablet or record, or for causing the record to move longitudinally as it revolved either beneath or above the stylus so as to present the spirals of the record successively to the point of the stylus. The early patents to Edison, Bell & Tainter and Berliner, and to others of the prior art, all show these facts which are well known by every person familiar with the art of recording and reproducing sound.

I have seen, examined and used the mechanical feed-device Talk-o-phone, such as those referred to in the affidavit hereto annexed of Edward F. Leeds, and unquestionably such mechanical
98 feed-device Talk-o-phone, and all similar feed-device talking machines, are intended for and are capable of the perfect reproduction of sound from sound-records such as defendant's sound records having lateral undulations in a spiral groove upon the face of a flat disc. The allegations in the moving affidavits of Middleton, Hadden and Kennedy, setting forth that defendant's sound-records are intended for use and are capable of use only upon sound-reproducing machines embodying the invention of claims 5 and 35 of the patent in suit and not employing mechanical feed-devices are unquestionably false. The entire history of the art is a complete refutation of such false allegations.

The Valiquet Novelty Company of Newark, N. J., manufacturers of talking machines, has recently offered to manufacture for the Leeds & Catlin Company disc talking machines designed to reproduce sound from disc records having lateral undulations by the aid of a stylus mechanically fed across the face of the record. I have examined the principle of construction of the said machine and know that such machine will perfectly reproduce sound from disc records having lateral undulations. The Leeds & Catlin Company and other manufacturers in the United States, according to the information which I have received, are engaged in the manufacture of sound reproducing machines operating by mechanical feed devices or by means other than the invention of claims 5 and 35 of the patent in suit to be used in the reproduction of sound from sound-records, such as defendant's disc sound-records having lateral undulations. To my knowledge defendant's sound-records are sold

in large quantities for export, and have been exported in large quantities by defendant to foreign countries.

Flat disc sound-records having lateral undulations are a very temporary part of a sound reproducing machine. All sound reproducing machines employing such records are designed and constructed so that the record may conveniently and frequently
99 be removed and replaced. A machine constructed so that the record could not conveniently be removed and replaced would be of no value whatever, since after the record had been played a few times it would be worn out and destroyed and the machine would then become useless. The lasting qualities of flat disc sound-records having lateral undulations depend upon the material of which the tablet is composed and upon the perfection of manufacture of the record. All such records are made substantially to-day of the same material. The first time that the reproducing stylus passes over the record-groove, the record begins to wear out. The stylus is a sharp steel needle, and it cuts into and wears down the edges of the surface of the record. Not infrequently a record is destroyed the first time that it is played. Ordinarily a record may be played for about thirty times. Often from ten to fifteen reproductions will destroy a record, while sometimes, if the record is an exceptional one, it may be successfully played as often as fifty or sixty times. However, an inexperienced user of a machine may scratch the record even before playing and thus destroy the record, and often the records are broken and thus become useless. The Victor Talking Machine Company and its licensees, the American Graphophone Company and the Universal Talking Machine Company have sold hundreds of thousands of sound reproducing machines operating according to claims 5 and 35 of the patent in suit, together with flat sound records having lateral undulations, without any restriction whatever as to the right of the purchaser and user of such machines to replace the records thus purchased from complainants and their licensees by other records made by others. The purchaser of such machines and records from complainants and their licensees has always understood that he had a perfect right to play any record of any make upon his machine, and no intimation of any restriction to the contrary has ever been given by complainants or its
100 licensees to the best of my knowledge, information and belief. If any such restriction had ever been made my information and sources of information are such that I would, without doubt, have heard it.

LEO MOELLER.

Subscribed and sworn to before me this 28th day of November,

HARRY C. ADAMS,

[NOTARY'S SEAL.] *Notary Public, New York Co.*

Circuit Court of the United States, Southern District of New York.
In Equity.

No. 8797.

VICTOR TALKING MACHINE COMPANY and UNITED STATES GRAMOPHONE COMPANY, Complainants,
vs.
LEEDS & CATLIN COMPANY, Defendant.

STATE AND COUNTY OF NEW YORK, *ss:*

Louis Hicks, being duly sworn, says:

I am solicitor and counsel for defendant in the above entitled suit in equity and have been since the commencement thereof. I was present at the argument upon the final hearing in the prior suit of these complainants against the American Graphophone Company before Judge Hazel on June 5 and 6, 1905, in which suit claims 5 and 35 of the patent here in suit were sustained as valid and found to be infringed. I have also examined the papers of record
101 on file in that suit both in the Circuit Court and in the Circuit Court of Appeals. The defendant, the American Graphophone Company, made no contention of non-infringement, but contended that said claims 5 and 35 were invalid. The proof of infringement by the American Graphophone Company in that suit rested upon the following stipulation, which is to be found at page 15 of the record on appeal in that suit:

"It is stipulated between counsel that the foregoing exhibits marked respectively 'Complainants' Exhibit, Defendant's Machine,' and 'Complainants' Exhibit Defendant's Sound-Record' were made by the defendant and sold within the Southern District of New York subsequent to the date of the patent in suit and prior to suit brought, and that the said record exhibit was made for use upon the said machine exhibit and was so used."

There was no other proof of infringement, and the proof of infringement in that suit, therefore, was confined to the manufacture, sale and use by the American Graphophone Company of the invention of claims 5 and 35 of the patent in suit as embodied in the said exhibits. Judge Hazel in his opinion distinguished the principle of operation in the Berliner machine from the principle of operation in the Edison phonograph and the Bell & Tainter graphophone of the prior art as follows:

"The principle of operation in the Berliner machine is thought to be essentially different from that of the machine of Bell & Tainter. In the latter, an auxiliary joint or feed-screw was necessary, as already stated, to effectuate the required passage of the record over the point of the stylus, or to cause the stylus and reproducing diaphragm to travel across the surface of the record. In complainants' patent, on the other hand, it is shown that the lateral vibrations of the stylus point and the propelling of the same over the surface of

the record without mechanical assistance and through the
102 means of the groove alone was the primary object of the inventor. * * * The broad claims in suit, in my judgment, cannot be restricted to a record of even depth, such as described in the specification."

Upon the motion for preliminary injunction in this suit, the sole proof of infringement consisted in affidavits alleging that defendant sold a machine known as the Ohio Talk-O-Phone, together with sound records for use thereon. Defendant admitted that in the settlement of an account with the Talk-O-Phone Company it had taken in part payment a few Talk-o-phones. Hence, in the prior suit, the question of infringement was confined to the making, using and selling by defendant of machines and sound records for use thereon, and in this suit the question of infringement was confined to the selling by defendant of machines not licensed by complainants, together with sound records for use thereon. In each case the machines combined with the records embodied the invention of claims 5 and 35 of the patent in suit, and did not operate by the aid of mechanical feed-devices of the prior art. The questions which complainants seek to raise upon this motion were not adjudicated by the Courts either in the prior suit or in this suit.

Upon the argument of the motion for preliminary injunction in this suit before Judge Townsend, complainants' counsel refused to contend that the mechanical feed-device Talk-o-phone was an infringement of claim 5 or claim 35 of the patent in suit. Upon this point complainant's counsel said in his brief:

"As these so-called 'mechanical feed' machines have not been offered in this case as alleged infringing machines, it is not an issue now in these suits."

Complainants' counsel, therefore, refused to discuss the question of the mechanical feed-device Talk-o-phones and stated that
103 he presumed that the Court does not desire, without the benefit of a full discussion, to say, upon these motions, whether these so-called 'mechanical feed' machines are, or are not, mere attempted evasions of claims 5 and 35 of the patent in suit.

In view of the prior art and of Judge Hazel's finding, which also was the finding of the Circuit Court of Appeals in the prior suit, that the propelling of the stylus over the surface of the record without mechanical assistance and through the means of the groove alone was the primary object of the inventor, Berliner, the reason underlying the refusal of complainants' counsel to contend that mechanical feed-device machines were an infringement appears.

Upon the settlement of the order or decree for preliminary injunction herein by Judge Townsend, on May 2, 1906, complainants' counsel served a proposed order, a copy of which is hereto annexed, which order was not signed by Judge Townsend. The order signed by Judge Townsend on May 2, 1906, is the same as the order entered in the Circuit Court on October 27, 1906, upon the mandate of the Circuit Court of Appeals, as set forth in paragraph Seventh of the petition upon this motion.

I have read the foregoing affidavits of Edward F. Leeds, Louis H. Bunker, Loring L. Leeds and Leo Moeller, and the statements contained therein are, to the best of my knowledge, information and belief, true. On January 19, 1906, at 81 Franklin street, in New York City, as stated in the affidavit of Edward F. Leeds, Mr. Nye exhibited to Mr. Leeds and to me the machines mentioned by Mr. Leeds which reproduce sound from cylindrical records having vertical undulations without the aid of any mechanical feed-device, the record-groove alone causing the reproducing stylus to move across the face of the record. On November 2, 1905, at the Imperial Hotel in the City of New York, I saw the mechanical feed-device
104 Talk-o-phone in successful and perfect operation, and produced two such mechanical feed-device Talk-o-phones of perfect construction and operation on the argument for preliminary injunction in this suit before Judge Townsend.

I have advised the Leeds & Catlin Company and its officers, as set forth in the annexed affidavit of Edward F. Leeds. Such advice was given upon the basis of my knowledge of the matters litigated in the prior suit against the American Graphophone Company, and in this suit upon the motion for preliminary injunction and of the decisions of the Courts thereon, and further upon the basis of a very careful reading and consideration of the decided cases relating to the rights and duties of the defendant under the preliminary injunction. To my knowledge the defendant, the Leeds & Catlin Company, believes that no act has been committed by it or through it in violation or disregard of the said preliminary injunction and that it has a perfect right to manufacture, use and sell flat disc sound-records, provided said records are not used upon an infringing machine or sold for use upon an infringing machine.

There is now pending in this court a suit brought by these complainants against this defendant upon Patent No. 548,623, granted October 29, 1895, to Berliner for a sound-record and method of making the same. In a prior suit of these complainants against the American Graphophone Company, Judge Hazel found that said Berliner Patent No. 548,623 was not infringed and the complainants have taken an appeal to the Circuit Court of Appeals, which is No. 116 upon the present calendar of that court. This patent No. 548,623 is one mentioned in the agreement of December 8, 1903, between the Victor Talking Machine Company and the American Graphophone Company as a patent upon which the said Graphophone Company is to pay a royalty to the said Victor Company if any claim thereof is sustained relating to sound-records. The
105 said agreement of December 8, 1903, is already proved of record in this suit. In addition, there is a suit pending in this court by the American Graphophone against this defendant upon Patent No. 688,739, of December 10, 1901, to Jones. In a prior suit of said Graphophone Company against the Universal Talking Machine Company complainants' licensee, Judge Hazel held said Jones' patent to be invalid (145 Fed., 606 and 643).

Said Jones' patent is another one of the record patents mentioned in said agreement of December 8, 1903.

When Judge Townsend granted the motion for preliminary injunction herein and granted similar motion against deponent's client, the Talk-O-Phone Company, he stayed the injunctions pending appeal upon the filing of bonds by this defendant and by the Talk-O-Phone Company. As the appeals could not be argued before the summer vacation, complainants moved to increase the bonds. The motion in the Talk-O-Phone Company case was granted, as the Talk-O-Phone Company was engaged in the manufacture and sale of machines; but the motion against this defendant was denied because it was shown that this defendant was engaged solely in the manufacture and sale of sound-records, and had merely purchased and sold a few machines, never having manufactured the same.

LOUIS HICKS.

Subscribed and sworn to before me this 28th day of November, 1906.

[NOTARY'S SEAL.] FRANK Z. DEMAREST,
Notary Public, New York.

106 At a Stated Term of the Circuit Court of the United States for the Southern District of New York, held in the Court Room thereof, in the Post Office Building, in the Borough of Manhattan and City of New York, this — day of ——, 1906.

Present: Hon. —— ——, U. S. Circuit Judge.

In Equity. No. 8797.

Suit on Berliner Gramophone Patent, No. 534,543.

VICTOR TALKING MACHINE COMPANY and UNITED STATES GRAMOPHONE COMPANY, Complainants,
vs.
LEEDS & CATLIN COMPANY, Defendant.

Decree for Preliminary Injunction.

And now, to wit, this — day ——, 1906, this cause having been heard upon motion of the complainants for preliminary injunction, and upon the affidavits and exhibits filed by the complainants in support thereof, and the defendant having filed affidavits and exhibits in opposition to said motion, and the motion having been argued by Horace Pettit, Esq., counsel for the complainants, and Louis Hicks, Esq., counsel for the defendant, and the Court having considered the same, it is ordered:

107 1. That a writ of preliminary injunction issue in this cause, restraining the defendant, the Leeds & Catlin Company, its associates, servants, clerks, agents and workmen, and each and every one of them, from manufacturing, using or selling, or in any way

disposing of, until further order of this Court sound reproducing apparatus or devices embodying the subject-matter of claim 35 of the Letters Patent in suit, which claim reads as follows, namely:

"35. In a sound reproducing apparatus consisting of a travelling "tablet having a sound-record formed thereon and a reproducing "stylus-shaped for engagement with said record and free to be "vibrated and propelled by the same, substantially as described,"

and from manufacturing, using or selling or in any way disposing of apparatus or devices which embody the method of claim 5 of said Letters Patent, which claim reads as follows, namely:

"5. The method of reproducing sounds from a record of the "same, which consists in vibrating a stylus and propelling the same "along the record by and in accordance with the said record, sub-"stantially as described,"

or which is intended to be operated in accordance with said method claim 5, and from using or employing in any way said method specified in said claim 5 of the Letters Patent in suit.

108 Circuit Court of the United States, Southern District of New York. In Equity.

No. 8797.

VICTOR TALKING MACHINE COMPANY and UNITED STATES GRAMOPHONE COMPANY, Complainants,

vs.

LEEDS & CATLIN COMPANY, Defendant.

STATE AND COUNTY OF NEW YORK, *ss:*

Edward F. Leeds, being duly sworn, says: I am president of the Leeds & Catlin Company, and have heretofore made an affidavit upon this motion. I am informed by defendant's counsel that, upon the oral argument of this motion, complainants' counsel stated to the Court that at the time of the granting of the preliminary injunction herein this defendant was selling sound records to the Talk-O-Phone Company, which made infringing machines, and that after the issue of the preliminary injunction herein defendant continued doing the very thing which it has previously done. This charge was not made in the moving papers upon this motion, and there was, therefore, no occasion specifically to deny it. I am advised by defendant's counsel that the said statement of complainants' counsel was made with a purpose of prejudicing this defendant before the Court, and, as the statement is absolutely and unqualifiedly untrue, I desire so to state in this affidavit. The fact is that, for nearly a year prior to April 13, 1906, the date on which the motion for preliminary injunction herein was argued, the Leeds & Catlin Company
109 had not sold records of any kind to the Talk-O-Phone Company, and the Leeds & Catlin Company has sold no record

to the Talk-O-Phone Company at any time since the argument of the motion for preliminary injunction down to the present day. Therefore, at the time of the motion for preliminary injunction, and for a long time prior thereto, defendant was not, and had not been selling records for use on infringing machines put upon the market by the Talk-O-Phone Company. The records which defendant had sold to the Talk-O-Phone Company were "Gold Label Records." Defendant never sold to the Talk-O-Phone Company at any time the Imperial Record or any record which it has manufactured and sold since it ceased selling records to the Talk-O-Phone Company at the time aforesaid. Defendant has never sold its Imperial record to the maker and seller of an infringing machine, nor has it sold any record to the maker and seller of an infringing machine since it discontinued the selling of the Gold Label records to the Talk-O-Phone Company at the time aforesaid. All the records mentioned in the moving affidavits upon this motion are Imperial records. The infringement complained of upon the motion for preliminary injunction was the sale of a talking machine with records in November, 1903—over three years ago. Defendant had then taken a few talking machines from the Talk-O-Phone Company in part settlement of an account, and with the exception of those machines defendant has never bought, sold or dealt in talking machines of any kind, until in October, 1906, it began to buy, sell and manufacture mechanical feed-device machines. As already stated in my previous affidavit, defendant has not since the affirmance of the order for preliminary injunction herein sold any record to be used upon or to complete an infringing machine or in any way to be used in infringement of the claims in suit of the patent, and has done no act which, taken in connection with the act of another person not
110 acting under the authority of complainant, would constitute an infringing act. The statement of complainants' counsel, that defendant after the injunction has continued to supply records for use on infringing machines, is entirely and absolutely untrue.

EDWARD F. LEEDS.

Subscribed and sworn to before me this 4th day of December, 1906.

HARRY C. ADAMS,
[NOTARY'S SEAL.] *Notary Public, New York Co.*

(Endorsed:)—U. S. Circuit Court, Southern Dist. of New York.—Victor Talking Machine Co. and United States Gramophone Co., Complainants, against Leeds & Catlin Company, Defendant.—Defendant's Answer and Affidavits opposing Motion on Contempt.—Louis Hicks, Counsel for Defendants, 71 Nassau Street, New York, N. Y.—U. S. Circuit Court, Southern District New York.—Filed Nov. 28, 1906.—John A. Shields, Clerk.

Circuit Court of the United States, Southern District of New York.

VICTOR TALKING MACHINE COMPANY ET AL., Complainants,
vs.
LEEDS & CATLIN COMPANY, Defendant.

LACOMBE, *C. J.:*

Aside from any other questions arising upon this motion as
111 to disobedience of injunction order, I am entirely satisfied from the proofs that defendants, not only in the instances set forth in complainants' moving papers, but in very many other instances, have manufactured and sold the records of claim 35 with the intent that they should be used in combination with the other elements of that claim in machines other than "Mechanical feed." Indeed it is difficult to escape the conviction that the larger part of defendant's sales were contrived by them to enable the owners of reproducers purchased from complainant or its licensees to produce such musical pieces as such owners might desire to hear, through the co-operation in combination with such reproducers of records made by defendant instead of records made by complainant-. No effort to restrict the use to which defendant's discs should be put by notice on their face or otherwise was made until after motion, and the affidavits are not as satisfying as they might be that such notice has since been affixed; and such notice might fairly go further and advise the purchasers that to use it on one of complainants' machines would make the user an infringer. This seems to be a case of contributory infringement—an entirely voluntary and intentional one, not in any wise excused by the circumstance that complainant- had theretofore sold reproducers combined with other records to such owners (Am. Graph. Co. *v.* Leeds, 87 F. R., 873). Nor is the substitution of these new records, bought more frequently in order to increase the repertory of tunes than as substitutes for worn-out discs and wholly unlike the toilet paper in Morgan Envelope case (which was destroyed by a singe use), in any legitimate sense "repairs" (see Davis Electrical Works *v.* El. Light Co., 60 F. R., 276). Nor is the advice of counsel a sufficient excuse, although where it has been honestly relied upon a heavy penalty will not usually be imposed, but only a sum sufficient to reimburse the moving party and act as a deterrent from future infringing actions.

112 Defendant is found in contempt and fine imposed of $1,000, one half to United States, one-half to complainant-. Collection will be suspended pending appeal.

Jan. 5, 1907.

(Endorsed:)—Circuit Court of the United States, for the Southern District of New York.—Victor Talking Machine Co. *et al. vs.* Leeds & Catlin Company.—Opinion, Lacombe, *C. J.*—U. S. Circuit Court, Southern District New York.—Filed Jan. 5, 1907.—John A. Shields, Clerk.

Circuit Court of the United States, Southern District of New York.
In Equity.

No. 8797.

VICTOR TALKING MACHINE COMPANY and UNITED STATES GRAMOPHONE COMPANY, Complainants,
vs.
LEEDS & CATLIN COMPANY, Defendant.

Decree for Contempt.

And now, to wit, this 11th day of January, A. D. 1907, on the return of Rule to show cause herein why an attachment should not issue against the above named defendant, Leeds & Catlin Company, issued out of this Court on the 19th day of November, A. D. 1906, upon the affidavits filed in support of said order and the exhibits referred to therein, and the defendant having filed affidavits in opposition to said petition for attachment, and the complainant-
113 having appeared by *its* counsel, Horace Pettit, Esq., and the defendant having appeared by its counsel, Louis Hicks, Esq., and the question as to whether or not the attachment for contempt should issue against the above named defendant, having been argued on the 30th day of November, A. D. 1906, by counsel for the respective parties and it appearing to the Court, upon careful consideration of the matter, that the said defendant has violated said order and writ of injunction of this Court, in that defendant, after said order and writ of injunction, sold the records of claim 35 of the patent in suit, No. 534,543 of February 19, 1895, to Berliner, with the intent that said records should be used in combination with the other elements of that claim in machines (other than "mechanical feed" machines), sold by complainants or their licensees combined with such records, for use in carrying out the method of claim 5.

Now, therefore, it is ordered, adjudged and decreed that the said Leeds & Catlin Company is in contempt of court for having violated, as aforesaid, the writ of injunction which issued under the order of this Court on the 27th day of October, A. D. 1906, and which was served on defendant on the 29th day of October, A. D. 1906, and that a fine be and is hereby imposed upon the said Leeds & Catlin Company of one thousand dollars ($1,000), one-half to the United States and one-half to complainants, to be paid to the Clerk of this Court; and that upon the payment of said fine of said one thousand dollars ($1,000) to the Clerk of this Court said Clerk shall turn over and pay to the above-named complainants or *its* counsel the sum of five hundred dollars ($500), and to the United States the remaining sum of five hundred dollars ($500).

E. HENRY LACOMBE,
U. S. C. Judge.

(Endorsed:)—U. S. Circuit Court, Southern Dist. of New York. —Victor Talking Machine Co. *et al.*, **Complainants, against**
114 Leeds & Catlin Company, Defendant.—Order adjudging Defendant in Contempt.—Louis Hicks, Counsel for Defendant, 71 Nassau St., New York, N. Y.—U. S. Circuit Court, Southern District, New York.—Filed Jan. 11, 1907, John A. Shields, Clerk.

Circuit Court of the United States, Southern District of New York.
In Equity.

No. 8797.

VICTOR TALKING MACHINE COMPANY and UNITED STATES GRAMOPHONE COMPANY, Complainants,
vs.
LEEDS & CATLIN COMPANY, **Defendant.**

Order Staying Collection of Fine.

An order having been signed and entered herein this 11th day of January, 1907, finding defendant in contempt for violation of the writ of injunction herein and fining the defendant in the sum of one thousand dollars ($1,000); now, on motion of Louis Hicks, solicitor for defendant, it is

Ordered, adjudged and decreed that the collection of said fine be, and the same hereby is, stayed pending appeal from said order on contempt; and that the defendant, the Leeds & Catlin Company, within fifteen days of the entry of this order, shall either file with the Clerk of this Court a good and sufficient bond, to be approved by said Clerk, or deposit with said Clerk the sum of one thousand
115 dollars ($1,000) in cash as security to secure the payment of said fine when due, otherwise the collection of said fine will not be suspended and shall be payable within twenty days of the entry of this order.

E. HENRY LACOMBE,
U. S. C. Judge.

(Endorsed:)—U. S. Circuit Court, Southern Dist. of New York. —Victor Talking Machine Co. *et al.*, Complainants, *vs.* Leeds & Catlin Company, Defendant.—Order Staying Collection of Fine.—Louis Hicks, Counsel for Defendant, 71 Nassau St., New York, N. Y.—U. S. Circuit Court, Southern District, New York.—Filed Jan. 11, 1907.—John A. Shields, Clerk.

Circuit Court of the United States, Southern District of New York.
In Equity.

No. 8797.

VICTOR TALKING MACHINE COMPANY and UNITED STATES GRAMOPHONE COMPANY, Complainants,
vs.
LEEDS & CATLIN COMPANY, Defendant.

Order Partially Staying Preliminary Injunction.

An order having been signed and entered herein on the 11th day of January, 1907, finding defendant in contempt for violation of the writ of injunction herein and fining the defendant in the sum of one thousand dollars ($1,000); and defendant having moved thereupon for an order staying, pending appeal from said order on contempt, the decree for preliminary injunction and preliminary injunction heretofore granted and issued herein in so far as the same have been construed by this Court on the motion for contempt to enjoin and restrain defendant from selling disc sound records for use in the United States upon machines sold by complainants and their licenses, together with disc sound records, and said motion having been argued by counsel before me on the 11th day of January, 1907, due deliberation having been had, now, upon motion of Louis Hicks, solicitor for defendant, and upon reading the affidavits filed in support of said motion, it is

Ordered, adjudged and decreed that defendant's said motion for said above mentioned stay be, and the same hereby is, granted; provided that the appeal from said order on contempt shall be promptly taken and diligently prosecuted; and provided also that defendant shall, within fifteen days from the filing of this order, file with the Clerk of this Court a bond in the sum of ten thousand dollars ($10,000), with sufficient surety, to be approved by the Clerk of this Court, as security to indemnify complainants for damages and profits due to infringement accruing during the period of said stay; and provided also that defendant shall, on the first day of each calendar month during the period of said stay and on the last day of said stay, file with the Clerk of this Court a statement sworn to by one of its officers showing the number of disc sound records sold by it during the month or part of the month preceding the day of the filing thereof.

E. HENRY LACOMBE,
U. S. C. Judge.

(Endorsed:)—U. S. Circuit Court, Southern Dist. of New York. —Victor Talking Machine Co. *et al.*, Complainants, against Leeds & Catlin Company, Defendant.—Order Partially Staying Injunction.—Louis Hicks, Counsel for Defendant, 71 Nassau Street, New York, N. Y.—U. S. Circuit Court, Southern District New York.—Filed Jan. 11, 1907.

Circuit Court of the United States, Southern District of New York.
In Equity.

No. 8797. On Patent No. 534,543.

VICTOR TALKING MACHINE COMPANY and UNITED STATES GRAMOPHONE COMPANY, Complainants,
vs.
LEEDS & CATLIN COMPANY, Defendant.

Know all men by these presents:

That we, the Leeds & Catlin Company, of 53 East Eleventh street, in the Borough of Manhattan, City of New York, as principal and National Surety Company, having an office and place of business at No. 62 Liberty street, Borough of Manhattan, City of New York, as surety are held and firmly bound unto Victor Talking Machine Company and United States Gramophone Company and the United States in the sum of one thousand dollars ($1,000) lawful money of the United States of America, to the payment of which, well and truly to be made, the said principal and the said surety bind
118 themselves, their and each of their successors and assigns jointly and severally firmly by these presents.

Sealed with our seals and dated this 25th day of January, in the year one thousand nine hundred seven.

Whereas, on the 11th day of January, 1907, an order was made by the Honorable E. Henry Lacombe, one of the judges of the above named court, and filed in the United States Circuit Court for the Southern District of New York on said 11th day of January, 1907, in a proceeding entitled "Victor Talking Machine Company and United States Gramophone Company, complainants, against Leeds & Catlin Company, defendant, in equity No. 8797," staying the collection of a fine of one thousand dollars ($1,000) imposed upon said defendant by an order entered in said suit and filed in said court on the 11th day of January, 1907, until the hearing and determination, in due course, of an appeal taken by defendant from said order on contempt fining defendant in said sum of one thousand dollars ($1,000), as in said order provided, and

Whereas, as a condition upon which the collection of said fine was stayed, a bond was ordered to be filed in the sum of one thousand dollars ($1,000) at defendant's election,

Now, therefore, the condition of this obligation is such, that if the defendant in the said action, that is, Leeds & Catlin Company, failing to make the said appeal by writ of error good, shall pay to the Clerk of said Circuit Court of the United States for the Southern District of New York said sum of one thousand dollars ($1,000), pro-

vided in said order on contempt, then this obligation to be
119 void, otherwise, to remain in full force and virtue, the amount, however, not to exceed one thousand dollars ($1.000).

[Seal: Leeds & Catlin Company, incorporated 1899; New York.]

LEEDS & CATLIN COMPANY,
By E. F. LEEDS, *Pres.*

Attest:
HENRY LEEDS,
Ass't Secretary.

[Seal: National Surety Company, incorporated 1899; New York.]

NATIONAL SURETY COMPANY,
By JOEL RATHBONE,
4th Vice-President.

Attest:
JOHN HOLMES,
Res. Ass't Secretary.

STATE AND COUNTY OF NEW YORK, *ss:*

On this 26th day of January, 1907, before me personally came Edward F. Leeds, to me known, who being by me duly sworn, did depose and say: That he resides in the Borough of Brooklyn, County of Kings, City and State of New York; that he is the president of Leeds & Catlin Company, the corporation described in and which executed the above instrument or bond; that he knew the seal of said corporation; that the seal affixed to said instrument is such corporate seal; that it was so affixed by order of the Board of Directors, and that he signed his name thereto by like order.

JOSEPH ISAACS,
[NOTARY'S SEAL.] *Notary Public (No. 6), New York Co.*

120 *Affidavit, Acknowledgment and Justification by Guarantee or Surety Company.*

STATE OF NEW YORK, *County of New York, ss:*

On this 25th day of January, one thousand nine hundred and seven, before me personally came Joel Rathbone, known to me to be the 4th Vice President of the National Surety Company, the corporation described in and which executed the within and foregoing bond of Victor Talking Machine Co. and ano. *vs.* Leeds & Catlin Co., as a surety thereon, and who, being by me duly sworn, did depose and say that he resides in the City of New York, State of New York; that he is the 4th Vice-President of said Company, and knows the corporate seal thereof; that the said National Surety Company, is duly and legally incorporated under the laws of the State of New York; that said Company has complied with the provisions of the

Act of Congress of August 13th 1894; that the seal affixed to the within Bond of Victor Talking Machine Co. and ano. *vs.* Leeds & Catlin Co. is the corporate seal of said Company, and was thereto affixed by order and authority of the Board of Directors of said Company; and that he signed his name thereto by like order and authority as 4th Vice-President, of said Company, and that he is acquainted with John Holmes, and knows him to be the Res. Ass't Secretary of said Company; and that the signature of said John Holmes subscribed to said Bond is in the genuine handwriting of said John Holmes, and was thereto subscribed by order and authority of said Board of Directors, and in the presence of said deponent; and that the assets of said Company, unencumbered, and liable to executions exceed its debt and liabilities of every nature whatsoever, by more than the sum of one million ($1,000,000.00) dollars.

121 That —— —— is our agent to acknowledge service in the Judicial District wherein this Bond is given.

JOEL RATHBONE.

Sworn to, acknowledged before me, and subscribed in my presence this 25th day of January, 1907.

PHILIP B. INGRAHAM,
Notary Public for the County of N. Y. (No. 13).

Certificate filed in Kings, Westchester, Richmond and Queens Counties.

(Endorsed:)—U. S. Circuit Court, Southern District of New York.—Victor Talking Machine Co. and United States Gramophone Co. Complainants, against Leeds & Catlin Company, Defendant.—Bond staying collection of fine.—Louis Hicks, Solicitor for Defendant, 71 Nassau St. New York, N. Y.—Approved as to form and also as to sufficiency of sureties, with reservation, however, to the complainants of the right at any time to examine the proper officers of the Surety Company, under oath, touching its assets, liabilities and financial condition generally.—John A. Shields, Clerk U. S. Circuit Court, Southern District of New York.—U. S. Circuit Court, Southern District of New York.—Filed Jan. 26, 1907.—John A. Shields, Clerk.

122 Circuit Court of the United States, Southern District of New York. In Equity.

No. 8797.

VICTOR TALKING MACHINE COMPANY and UNITED STATES GRAMOPHONE COMPANY, Complainant,

vs.

LEEDS & CATLIN COMPANY, Defendant.

Stipulation.

For the purpose of the appeal by writ of error from the judgment or decree on contempt, entered January 11, 1907, in the above entitled suit, it is stipulated as follows:

First. That the record and proceedings had in this Court in the above entitled cause, on the motion for preliminary injunction herein, having heretofore been certified by the Clerk of this Court to the United States Circuit Court of Appeals for the Second Circuit, under date of June 15, 1906, said record and proceedings need not be again certified to the said United States Circuit Court of Appeals for the Second Circuit, under the writ of error from said decree on contempt, but the transcript and the printed copies thereof, heretofore sent from this Court to said Circuit Court of Appeals, may be used as part of the record and proceedings to be certified and transmitted to said Circuit Court of Appeals under said writ of error, with the same force and effect as if again certified with the record and proceedings under said writ of error.

Third. Complainants' Exhibits, Bennett-Leeds & Catlin Company Catalogues, Nos. 1, 2, 3, 4 and 5, need not be certified as part
123 of the transcript of the record and proceedings under said writ of error, but either party may produce, use and refer to the original catalogues constituting complainants' said exhibits upon the argument in the Circuit Court of Appeals with the same force and effect as if the same were included in the transcript under said writ of error.

Dated January 25, 1907.

HORACE PETTIT,
Solicitor for Complainants.
LOUIS HICKS,
Solicitor for Defendant.

Filed January 26, 1907.

Circuit Court of the United States, Southern District of New York.
In Equity.

No. 8797.

VICTOR TALKING MACHINE COMPANY and UNITED STATES GRAMOPHONE COMPANY, Complainants,
vs.
LEEDS & CATLIN COMPANY, Defendant.

Assignment of Errors.

To the Honorable the Judges of the Circuit Court of the United States for the Second Circuit, in and for the Southern District of New York:

And now comes the above named defendant, Leeds & Catlin Company, plaintiff in error, by its solicitor, with its petition for
124 writ of error from the judgment or decree on contempt entered in this cause January 11, 1907, and designated in the said petition for writ of error, and makes and files the following assignment of errors:

The Circuit Court erred in the following particulars:

1. In holding that defendant violated the order and writ of injunction herein, in that defendant, after said order and writ of injunction, sold the records of claim 35 of the patent in suit No. 534,543 of February 19, 1895, to Berliner, with the intent that said records should be used in combination with the other elements of that claim in machines—other than "mechanical feed" machines—sold by complainants or their licensees combined with such records for use in carrying out the method of claim 5 of said patent.

2. In holding that the order and writ of injunction herein enjoined and restrained defendant in any way from selling the record forming an element of the combination of claim 35 of the patent in suit.

3. In not holding that defendant, notwithstanding the order and writ of injunction herein, was at liberty to sell the record of claim 35 of the patent in suit for use in combination with the other elements of that claim in machines embodying the invention of claims 5 and 35 of the patent in suit, sold by complainants or their licensees.

4. In holding that the intent with which defendant sold records was a violation of the order and writ of injunction herein without proof that any record sold by defendant was used by the purchaser in infringement of claim 35 of the patent in suit.

5. In holding that the intent with which defendant sold records was a violation of the order and writ of injunction herein without proof that any record sold by defendant was used by the pur-
125 chaser in infringement of claim 5 of the patent in suit.

6. In holding that the intent with which defendant sold records was a violation of the order and writ of injunction herein

without proof that defendant knew or was informed that the purchaser intended to use a record purchased in infringement of claim 5 or claim 35 of the patent in suit.

7. In holding that the selling of records by defendant to be used by the purchaser to replace a record purchased by him, from complainants or their licensees, together with a machine, embodying in combination the invention of claims 5 and 35 of the patent in suit, was a violation of the order and writ of injunction herein.

8. In not holding that, under the order and writ of injunction herein, defendant was at liberty to sell records to purchasers, from complainants or their licensees, of machines and records, embodying in combination the invention of claims 5 and 35 of the patent in suit, to enable such purchaser to repair the combination of such machine and record when the record should be worn by use or broken.

9. In holding that the question of defendant's right to sell records for use on machines embodying the invention of claims 5 and 35 of the patent in suit, sold by complainants or their licensees, had been adjudicated by the Court against defendant on the motion for or by the order and writ of injunction herein.

10. In not holding that the question of defendant's right to sell records for use on machines embodying the invention of claims 5 and 35 of the patent in suit, sold by complainants or their licensees, was a new and doubtful question which was raised for the first time upon the motion to punish defendant for contempt, and which
126 should not be passed upon in any such proceeding as a proceeding to punish for contempt.

11. In not holding that the records sold by defendant were adapted for a useful purpose other than for use upon machines embodying the invention of claims 5 and 35 of the patent in suit, and that defendant was, therefore, at liberty to sell such records on the open market.

12. In holding that defendant sold records with the intent that the same should be used in combination with the other elements of claim 35 of the patent in suit on machines sold by complainants or their licensees.

13. In not holding that the purchaser, from complainants or their licensees, of a machine and record embodying in combination the invention of claims 5 and 35 of the patent in suit, had a legal right to improve upon the said combination as he saw fit, and that defendant had a right to sell records to such purchaser to enable him to accomplish such purpose.

14. In holding that defendant by the sale of records contributed to infringement of claims 5 and 35 of the patent in suit, and thereby violated the order and writ of injunction.

15. In not holding that the record is a perishable, temporary element of the combination forming the machine embodying the invention of claims 5 and 35 of the patent in suit, which must be, and is intended to be, frequently replaced, and that defendant had the right to sell such records to the purchasers of such combination from complainants or their licensees to enable them frequently to

replace such perishable, temporary records or parts of the combination.

127 16. In not holding that complainants and their licensees sold the combination embodying the invention of claims 5 and 35 of the patent in suit to purchasers without restriction as to the records to be used to replace those purchased, and that defendant, by reason thereof, had the right to sell records to such purchasers for use in replacing records so purchased with machines from complainants and their licensees.

17. In not holding that defendant's records were articles of commerce which defendant could legally sell for export to foreign countries, for use in the United States on mechanical feed-device machines and for other lawful purposes, and that the sale of records by defendant on the open market was, therefore, a lawful act and not a violation of the order or writ of injunction herein.

18. In holding that the question of contributory infringement was involved in the sale by defendant of its records, the Court not finding that defendant sold a record to any person who constructed the other elements of claim 35 of the patent in suit for use with such record or to any person who used such other elements, except persons who had purchased the same, together with records, from complainants or their licensees.

19. In holding that defendant sold records with an intent to contribute to the infringing act of another and in violation of the order and writ of injunction herein.

20. In construing claims 5 and 35 of the patent in suit and the order and writ of injunction herein so as to give to complainants a monopoly of the unpatented record forming part of the combination of claim 35.

21. In not holding that when complainants or their
128 licensees sold the combination of claim 35 of the patent in suit, said combination passed out of the monopoly of the patent and the purchaser thereof had the right to repair, improve upon and use the same as if dealing with property of any other kind, and, therefore, the right to purchase from defendant records to replace the records of the purchased combination.

22. In not holding that complainants and their licensees, by the selling of the elements, other than the record, of claim 35 of the patent in suit, impliedly licensed the purchaser thereof to combine a suitable record with such purchased elements, and for that purpose to purchase such a record from persons other than complainants or their licensees.

23. In holding that the substitution of a new record for a record of the combination of claim 35 of the patent in suit is not a repair of the combination.

24. In holding that the substitution of a new record for a record of the combination of claim 35 of the patent in suit is not an improvement of the combination.

25. In holding that a purchaser, from complainants or their licensees, of the combination of claim 35 of the patent in suit, had not the right to purchase from another than complainants or their

licensees, a new record to substitute in the said combination the new record for the old record thereof in order to increase his repertory of tunes, and that defendant had not the right to sell a record to such purchaser for such purpose.

26. In holding that because a purchaser, from complainants or their licensees, of the combination of claim 35 of the patent in suit, may frequently purchase a new record to increase his repertory of tunes, he has not the right to purchase, from another than
129 complainants or their licensees, a new record in order to repair or improve the said combination.

27. In adjudging defendant in contempt of the order and writ of injunction herein.

28. In adjudging that defendant had disobeyed the order and writ of injunction herein.

29. In adjudging that defendant be fined in any sum.

Dated January 26, 1907.

LOUIS HICKS,
Solicitor for Defendant and Plaintiff in Error.

Filed, January 26, 1907.

National Surety Company.

Circuit Court of the United States of America for the Southern District of New York in the Second Circuit.

VICTOR TALKING MACHINE COMPANY and UNITED STATES GRAMOPHONE COMPANY, Complainants,
vs.
LEEDS & CATLIN COMPANY, Defendant.

Bond for Damages and Costs.

Know all men by these presents, That the National Surety
130 Company, having an office and principal place of business at No. 346 Broadway, in the City of New York, County and State of New York, is held and firmly bound unto the above named Victor Talking Machine Company and United States Gramophone Company, in the sum of two hundred and fifty ($250) dollars, to be paid to the said Victor Talking Machine Company and United States Gramophone Company, for the payment of which well and truly to be made, it binds itself, its successors and assigns, jointly and severally, firmly by these presents. Sealed with its seal, and dated the 24th day of January, in the year of our Lord one thousand nine hundred and seven.

Whereas, the above named Leeds & Catlin Company has prosecuted a writ of error to the United States Circuit Court of Appeals for the Second Circuit, to reverse the judgment or decree rendered in the above entitled suit by the Judge of the Circuit Court of the United States for the Southern District of New York.

Now, therefore, the condition of this obligation is such, that if the above named Leeds & Catlin Company shall prosecute its writ of error to effect, and answer all damages and costs if it fail to make his plea good, then this obligation shall be void, otherwise the same shall be and remain in full force and virtue.

NATIONAL SURETY COMPANY,
By JOEL RATHBONE,
Resident Vice-President.

Attest:
JOHN HOLMES, *Secretary.*

Sealed and delivered, and taken and acknowledged this 24th day of January, 1907, before me.

PHILIP B. INGRAHAM.

131 *Copy of By-Law.*

Be it remembered, that at a regular meeting of the Board of Directors of the National Surety Company, duly called and held on the 6th day of February, 1900, a quorum being present, the following By-Law was adopted:

"ARTICLE XIII, SEC. 1. All bonds, recognizances, contracts of "indemnity and other writings obligatory in the nature thereof shall "be signed by the President, the Vice-President, the Second Vice-"President, a Resident Vice-President, or an attorney in fact, and, "except when signed by an attorney in fact, shall have the seal of "the Company affixed thereto, duly attested by the Secretary, As-"sistant Secretary or a Resident Assistant Secretary. The Vice-"President, Second Vice-President and Resident Vice-President shall "each have authority to sign such instruments whether the Presi-"dent be absent or incapacit-ed or not; and the Assistant Secretary "and Resident Assistant Secretaries shall each have authority to "seal and attest such instruments, whether the Secretary be absent or "incapacitated or not. All such instruments executed as herein pro-"vided shall be as binding upon the Company as if the same were "signed by the President, duly sealed and attested by the Secretary."

CITY AND COUNTY OF NEW YORK, *ss:*

I, John Holmes, Res.-Asst. Secretary of the National Surety Company have compared the foregoing By-Law with the original thereof, as recorded in the Minute Book of said Company, and do certify that the same is a correct and true transcript therefrom and of the whole of said original By Law.

Given under my hand and the seal of the Company, at the City of New York, this 24th day of January, 1907.

JOHN HOLMES,
Res.-Ass't Secretary.

132 CITY AND COUNTY OF NEW YORK, *ss:*

On this 24th day of January, 1907, before me personally appeared Joel Rathbone, Res.-Vice-President of the National Surety Company, with whom I am personally acquainted, who, being by me duly sworn, said that he resided in the City of New York, that he is the Res.-Vice-President of the National Surety Company, the corporation described in and which executed the within instrument; that he knows the corporate seal of said Company; that the seal affixed to the within instrument is such corporate seal; that it was affixed by order of the Board of Directors of said Company; and that he signed said instrument as Res.-Vice-President of said Company by like authority; and that the liabilities of said Company do not exceed its assets, as ascertained in the manner provided in Section 3, Chapter 720 of New York Session Laws of 1893. And the said Joel Rathbone further said that he is acquainted with John Holmes, and knows him to be the Res.-Asst. Secretary of said Company; that the signature of the said John Holmes subscribed to the said instrument is in the genuine handwriting of the said John Holmes, and was thereto subscribed by the like order of the said Board of Directors and in the presence of him, the said Joel Rathbone, Res.-Vice-President.

PHILIP B. INGRAHAM,
Notary Public (No. 13) for the County of N. Y.

Certificate filed in Kings, Westchester, Richmond and Queens Counties.

(Endor-ed:) United States Circuit Court, Southern Dist. of N. Y. —Victor Talking Machine Company and United States Gramophone Company, Complainants, *vs.* Leeds & Catlin Company, Defendant.—Bond for Damages and Costs.—Louis Hicks, Solicitor for Defendant, 71 Nassau St., New York, N. Y.—Approved as to form and also as to sufficiency of sureties, with reservation, however, to the Complainants of the right at any time to examine the proper officers
133 of the Surety Company, under oath, touching its assets, liabilities and financial condition generally.—E. H. Lacombe, U. S. Circuit Judge.—U. S. Circuit Court, Southern District New York.—Filed Jan. 28, 1907.—John A. Shields, Clerk.

Citation on Writ of Error.

The President of the United States of America to the Victor Talking Machine Company and United States Gramophone Company, Greeting:

You, and each of you, are hereby cited and admonished to be and appear before a United States Circuit Court of Appeals for the Second Circuit, to be held in the Post Office Building in the City of New York, on the 3d day of February, 1907, pursuant to a writ of error filed in the office of the Clerk of the Circuit Court of the United States for the Southern District of New York, wherein Leeds &

Catlin Company is plaintiff in error, and you are defendants in error, and show cause, if any there be, why the judgment or decree in said writ of error mentioned should not be reversed or corrected and speedy justice should not be done in that behalf.

Witness, the Honorable E. Henry Lacombe, United States Circuit Judge for the Southern District of New York, this 26th day of January, 1907.

E. H. LACOMBE,
U. S. Circuit Judge.

Service of a copy of the above citation on this 31st day of January, 1907, is hereby admitted.

STIMSON & WILLIAMS,
Solicitors for Complainants.

(Endorsed:) U. S. Circuit Court, Southern Dist. of New York.—Victor Talking Machine Co. and United States Gramophone Co., Complainants, against Leeds & Catlin Company, Defendant.—(Original.)—Citation on Writ of Error.—Louis Hicks, Solicitor for Defendant, 71 Nassau Street, New York, N. Y.—U. S. Circuit Court, Southern District New York.—Filed Jan. 31, 1907.—John A. Shields, Clerk.

134 At a stated term of the United States Circuit Court of Appeals, held in the Court Room in the Post Office Building in the City of New York, on the 11th day of March, 1907.

Present: Hon. Wm. J. Wallace, Hon. Alfred C. Coxe, Hon. Wm. K. Townsend, Circuit Judges.

LEEDS & CATLIN COMPANY, Plaintiff in Error,
vs.
VICTOR TALKING MACHINE COMPANY and UNITED STATES GRAMOPHONE COMPANY, Defendants in Error.

Order as to Printing of Record.

Upon reading and filing the annexed stipulation of counsel for plaintiff-in-error and defendants-in-error, and upon motion of Louis Hicks, counsel for plaintiff-in-error, it is

Ordered that the record and proceedings on the motion for preliminary injunction herein, heretofore certified by the Clerk of the Circuit Court to this Court and printed for hearing upon the appeal from the order for preliminary injunction, need not again be printed, but the printed copies heretofore made may be used upon the hearing of the writ of error herein from the judgment or decree on contempt entered January 11, 1907, in this suit in the Circuit Court.

So ordered

WM. K. TOWNSEND,
U. S. C. J.

135 United States Circuit Court of Appeals, for the Second Circuit.

LEEDS & CATLIN COMPANY, Plaintiff in Error,
vs.
VICTOR TALKING MACHINE COMPANY and UNITED STATES GRAMOPHONE COMPANY, Defendants in Error.

Stipulation.

Counsel for plaintiff and defendants-in-error, as appears from page 122 of the printed record on the writ of error herein, made the following stipulation:—

"First. That the record and proceedings had in this Court in the above entitled cause, on the motion for preliminary injunction herein, having heretofore been certified by the Clerk of this Court to the United States Circuit Court of Appeals for the Second Circuit, under date of June 15, 1906, said record and proceedings need not be again certified to the said United States Circuit Court of Appeals for the Second Circuit, under the writ of error from said decree on contempt, but the transcript and the printed copies thereof, heretofore sent from this Court to said Circuit Court of Appeals, may be used as part of the record and proceedings to be certified and transmitted to said Circuit Court of Appeals under said writ of error, with the same force and effect as if again certified with the record and proceedings under said writ of error."

It is hereby stipulated and agreed that the annexed order may be entered without further notice.

Dated March 7, 1907.

LOUIS HICKS,
Counsel for Plaintiff in Error.
HORACE PETTIT,
Counsel for Defendants in Error.

(Endorsed: U. S. Circuit Court of Appeals for the Second Circuit. Leeds & Catlin Company, plaintiff in error, against Victor Talking Machine Co. and United States Gramophone Co., defendants in error. Original. Order as to printing of record. Louis Hicks, counsel for Pl'ff in error, 71 Nassau Street, New York, N. Y. United States Circuit Court of Appeals. Second Circuit. Filed Mar. 11, 1907, William Parkin, Clerk.)

136 United States Circuit Court of Appeals for the Second Circuit.

Before Wallace and Coxe, Circuit Judges, and Hough, District Judge.

Argued April 7, 1907.

THE LEEDS & CATLIN COMPANY, Plaintiff in Error,
vs.
THE VICTOR TALKING MACHINE COMPANY and THE UNITED STATES GRAMAPHONE COMPANY, Defendants in Error.

On Writ of Error to the Circuit Court of the United States for the Southern District of New York.

Louis Hicks, Esq., for plaintiff in error (def't below); Horace Pettitt, Esq., for defendants in error.

HOUGH, *D. J.:*

Defendants in error having brought suit against the plaintiff in error alleging infringement of the Berliner gramaphone patent (No. 534,543), procured an injunction restraining the manufacture, use or sale of sound reproducing apparatus or devices embodying the subject matter specified in claims 5 and 35 of said Patent, and also the use or employment in any way of the method set forth in Claim 5 thereof (reported 146 Fed. Rep., 534, affirmed by this Court 148 Fed. Rep., 1022). The claims protected by such adjudications are

"a sound reproducing apparatus consisting of (1) a travelling tablet having a sound record formed thereon and (2) a reproducing stylus shaped for engagement with said record and free to be vibrated and propelled by the same, substantially as described." (No. 35.)

and the

"*method* of reproducing sounds from a record of the same"

consisting in

137 "(1) vibrating a stylus and (2) propelling the same along the record by and in accordance with the said record substantially as described." (No. 5)

(the "record" being identical with the "travelling tablet" above mentioned).

In other words the invention under consideration is the Victor Talking Machine, and the feature thereof here important is that its reproduction of sound depends upon the record groove cut in the travelling tablet (or disc record) *compelling* the movement of the stylus across the face of the record by the horizontal revolution of the record itself.

The reproducer of which the stylus is an integral part is covered by claims of the Berliner patent not now in question: but of the

combination protected by Claims 5 and 35 thereof the stylus alone (or rather the machine of which it forms a part) is itself patented, while the traveling tablet,—sound record or disc record, is an unpatented article.

The Leeds & Catlin Company is a manufacturer of disc records, and since the decision of this Court above referred to asserts that it has become a dealer in another talking machine known as the "feed-device machine," which for the purposes of this cause may be regarded as not infringing any of the rights of the Victor Company under the Berliner patent. The Leeds & Catlin disc records are equally suitable for the feed-device machine and for that of the defendant in error.

Plaintiff in error was found to have sold disc records forming an essential part of the sound reproducing apparatus and devices covered by the above mentioned claims of the Berliner patent, and was fined for such violation of injunction. This writ of error is to review the order imposing said fine.

138 On ample evidence the Court below found: that most of the sales of Leeds & Catlin records were knowingly made by the plaintiff in error to enable the owners of Victor Talking Machines to reproduce such musical pieces as they wished, by the combination of the Leeds & Catlin record with said machines; that the Leeds & Catlin Company made no effort to restrict the use to which their records might be put until after motion to punish for contempt had been made; that the only effort at such restriction ever made was to insert upon the face of the records a notice to the effect that such record was intended and sold for use with the "feed-device machine;" that the records sold by plaintiff in error were far more frequently bought to increase the repertoire of the purchaser's Victor machine than to replace worn-out or broken records.

In our opinion it is also established by the evidence that the "feed device machine" above referred to, was not at or before the time of beginning this proceeding a practically or commercially known reproducer of musical or spoken sound, whereas the Victor machine, embodying the claims of the Berliner patent here under consideration, was at such times widely known and generally used, and that the plaintiff in error knew, and sold its records with the knowledge, that if its output was to be used at all by the public, it would be used with the Victor machine, and in the combination protected by the claims of the Berliner patent above referred to.

Upon these facts it is clear that the Leeds & Catlin Company have made and sold a single element of the claims of the Berliner patent, with the intent that it should be united to the other element and complete the combination;—and this is infringement

139 (Heaton Peninsular etc. Co. *vs.* Eureka Specialty Co., 77 F. R., at 297; adopted by this Court, Cortelyou *vs.* Lowe, 111 F. R., 1005).

The facts above recited are scarcely controverted, nor is it denied that the above inference should ordinarily be drawn; but plaintiff in error seeks to avoid that result by asserting that the records under

consideration are but temporary, perishable and unpatented parts of the patented combination; and therefore under Morgan Envelope Co., *vs.* Albany Paper Co., 152 U. S., 425, free to be manufactured and sold by anyone.

This contention is not supported by the evidence. Disc records are fragile, *i. e.*, brittle and easily broken; but they are not perishable, *i. e.*, subject to decay by their inherent qualities, or consumed by few uses or a single one. Neither are they temporary, *i. e.*, not intended to endure; on the contrary we find them capable of remaining useful for an indefinite period, and believe that they usually last as long as does the vogue of the sounds they record.

A rifle bullet, lost by a single discharge, is a perishable and temporary part of the combination of rifle and ammunition; and probably a cartridge shell, though capable of re-loading and use several times, may also be so regarded; but the missle of a toy gun, picked up and used again and again in its original form, is in no proper sense of the words either perishable or temporary, though it may by repeated use wear out sooner than does the gun with which it is repeatedly combined.

Again it is urged inasmuch as disc records are unpatented articles of commerce, which may be used upon the feed-device machine or lawfully exported to foreign countries, that no infringement can be alleged against the maker and seller thereof, because his
140 product may be or is in fact used by purchasers as one element of a patented combination. This argument disregards the facts established herein. It is true that the doctrine of contributory infringement has never been applied to a case where the thing contributed is one of general use, or suitable to a variety of other uses; especially where there is no definite purpose that the thing sold shall be employed with others to infringe a patent (Rumford Chemical Works *vs.* Hygienic Chemical Co., 148 F. R., at 866, and cases cited). But this plaintiff in error is shown to have manufactured and sold records for the express purpose of supplying the users of Victor machines; nor are such records staple articles of commerce (Cortelyou *vs.* Johnson, 145 F. R., at 935); on the contrary they cannot be practically used within the United States except with the Victor reproducer; for we regard the feed-device machine either as a curiosity or a pretence,—while the foreign trade of the plaintiff in error is not interfered with by the injunction, nor affected by the order under review.

It is further contended that those who purchase the patented combination in question without restriction, have lawful right to provide themselves with unpatented records made by any person whatever,—by way of replacement and repair. We perceive no substantial difference in the meaning of these words. To return to use something injured or lost, or to substitute for something defaced or destroyed another thing substantially identical, is to repair. The right of general repairing has not been questioned; but what plaintiff in error has done is not to mend or better broken or other records,

nor even to furnish new records identical with those originally offered by the Victor Company:—but to place upon
141 new discs such other sound records as are thought to command a market, and to induce users of the patented machine not to replace, but to increase their stock of recorded words and music.

The right of repair is measured by the right of the owner of the patented article, and such owner when doing what is above outlined is no more repairing his machine than is one repairing a stereopticon,—by changing the pictures therein to suit the whim of the person gazing through it.

The final contention against the order below, admits that the record actuating the stylus is a vital part of the combination claims of the patent in question; but declares that any purchaser of the patented article may immediately *substitute* for even an essential element therein, any other element which he conceives better suited to his purpose; and of course if this be true such preferred elements may be freely manufactured and sold.

We think this contention disposed of by Thompson-Houston, etc., Co., *vs.* Kelsey, etc., Co. 75 F. R., 1005; for the right of substitution there recognized was specifically restricted so as to refuse "authority to reconstruct or rebuild a combination which has been sold by the complainant;"—and whenever a Leeds & Catlin record is placed in a Victor machine the patented combination is instantly reconstructed.

The right of substitution rests upon the right to improve, pointed out by Clifford, J., in Chaffee *vs.* Belting Co., 22 How., at p. 223, and is different from the right to repair. But there is here no true substitution, and improvement is scarcely pretended. From
142 a legal standpoint the discs of both parties are identical, because the grooving capable of actuating the reproducer is the same; what is substituted is but music or words, and what is improved either price or novelty in sound. These are but accidents, and no more important than the color of the disc. The true inquiry is whether the owner of a patented combination, the elements of which are durable, unbroken, and in good repair, may buy from the patentee one specimen of a single element,—from an outsider an indefinite number of identical specimens of the same element, and keep and use them all, under cover of the word "substitution;" it further appearing that the element so procured and used is useful and commercially known only in respect of the said combination.

We think this cannot lawfully be done, and affirm the order below.

143 (Endorsed:) United States Circuit Court of Appeals, Second Circuit. The Leeds & Catlin Company *vs.* The Victor Talking Machine Company and others. Opinion. Hough, D. J. United States Circuit Court of Appeals, Second Circuit. Filed May 2, 1907. William Parkin, Clerk.

144 United States Circuit Court of Appeals, Second Circuit.

LEEDS & CATLIN COMPANY, Plaintiff in Error,
vs.
VICTOR TALKING MACHINE COMPANY ET AL., Defendants in Error.

WALLACE, *Circuit Judge* (dissenting):

In considering the question of infringement, claim 5 may be laid out in view, as it covers merely the function of the machine or combination of claim 35. It is more than doubtful whether the claim is not void upon its face, but assuming it to be valid, as must be done for present purposes, it is not infringed except by using the combination or machine of claim 35. A sound record is one of the parts enumerated in claim 35. It is however only a subsidiary part of the machine. Its relation to the machine proper is analogous to that of the sheet of paper in a typewriting machine or the stalks of corn in a corn-cutter. It is the thing which is to be operated on by the machine proper. The invention of the claim consisted in substituting a universal joint, or swinging arm, in lieu of a feed screw device, and thereby producing a new form of reproducing stylus for engaging with the record; and everything else in the machine was old. This clearly appears by the opinion in the suit in which the validity of the patent was established. Victor Talking Machine Co. *vs.* American Grapgophone Co., (140 F. R., 860).

It is not questioned and cannot be, that the plaintiffs in error were at complete liberty to make and sell such sound records
145 as they did, provided they did not sell them to purchasers who had no right to use them in combination with the other devices enumerated in claim 35. They have been adjudged guilty of contempt because they have sold them, or threatened to sell them, to users of the so-called "Victor" machine which embodies the combination, and who purchased their machines from the Victor Talking Machine Company, the owner of the patent. If these purchasers were at liberty to remove a sound record which originally accompanied the machine, and substitute for it a sound record sold by the plaintiffs in error, they were not infringers; and plainly the plaintiffs in error could not be infringers by assisting the purchasers to do that which they had a right to do. The real question in the case therefore is whether the purchasers of the Victor machines infringe the patent by using in their machine the sound records manufactured by the plaintiffs in error.

The purchaser of a patented machine from the owner of the patent acquires the right to do what he may choose with the particular machine, or any of its parts, as freely as he could if it, or none of its parts, had never been patented. Undoubtedly he cannot, after his machine has practically ceased to exist for any useful purpose, reconstruct it by reparation, nor can he then reconstruct it by disorganizing it and substituting as new parts the dominating and vital features of the patented invention. But no question of this kind is

involved in the present controversy. The only question is whether he can discard a part he does not care to use and substitute another. When such a part is not the fundamental invention in the patented machine, I cannot doubt he is at liberty to do so. This was so decided by this court in the "trolley stand" case (Thompson Houston Co. *vs.* Kelsey Co., 75 F. R., 1005), and is not an open ques-
146 tion in this court, unless it is proposed to reconsider and overrule that decision. He is not under any implied promise to maintain the machine as an entity and may do whatever he chooses with any of its parts, as fully as if there had not been a patent.

Let us consider from a practical standpoint what any other rule would lead to in a case like the present. The purchaser here has bought with his machine a sound-record, or half a dozen sound-records, each having the necessary grooves cut in it to enable him to reproduce for his own pleasure a particular piece of music. The record is a fragile thing which is to be inserted into the machine by the user, and must be adjusted accurately to the vibratory parts, and is to be removed when he wants to reproduce a different piece of music. Any slip of the hand will destroy it. Not only is this so, but its sound producing qualities are lost by the contact of the needle which is vibrated in its grooves long before the machine proper is worn out, and generally early in its normal life. Whenever either of these things happens, a machine, which costs at least seventeen dollars, is disabled unless a record like one which has been sold with it at the price of 35 cents, and which anybody and everybody has a right to make, may be replaced in the machine in lieu of the useless one. If the owner of the patent stops manufacturing records, or no longer has in the market a record grooved like the one which has been destroyed, what is the purchaser to do if he has not the right to replace a record without the permission of the patent owner? The purchasers of the Victor machine cannot require the Victor Talking Machine Company to supply them with records, and can only procure them from it on such terms as it pleases to exact. If they are not at liberty to procure them elsewhere, the company can dictate how long they are to enjoy the use of
147 their machines.

Such a rule of infringement as is adopted by the majority opinion, not only extends the monopoly of the patent owner to an unprecedented extent, but is subversive of the right of a purchaser of the patented thing to realize its fair measure of usefulness by making necessary reparations or changes by way of improvement.

148 Endorsed: United States Circuit Court of Appeals, Second Circuit. Leeds & Catlin Company, Plaintiff in Error, *vs.* Victor Talking Machine Company *et al.* Defendant in Error. Opinion (Dissenting) Wallace, C. J. United States Circuit Court of Appeals, Second Circuit. Filed May 2, 1907. William Parkin, Clerk.

149 At a Stated Term of the United States Circuit Court of Appeals, in and for the Second Circuit, held at the Court Rooms in the Post Office Building in the City of New York, on the 8th day of May, one thousand nine hundred and seven.

Present: Hon. William J. Wallace, Hon. Alfred C. Coxe, Circuit Judges; Hon. Charles M. Hough, District Judge.

LEEDS & CATLIN COMPANY, Plaintiff in Error,
against
VICTOR TALKING MACHINE COMPANY and UNITED STATES GRAMOPHONE COMPANY, Defendants in Error.

Order of Affirmance.

This cause came on to be heard on the transcript of record from the Circuit Court of the United States, for the Southern District of New York, and was argued by counsel.

On consideration whereof, it is now hereby ordered, adjudged and decreed that the judgment or decree for contempt of said Circuit Court filed Jan. 11, 1907 be and it hereby is affirmed with costs, and

It is further ordered that a Mandate issue to the said Circuit Court in accordance with this decree.

A. C. C.

150 Please take notice that an order of which the within is a copy, will be presented for settlement to U. S. Circuit Court of Appeals on the 8th day of May, 1907, at 10 o'clock in the forenoon, at the —— Court House in the City of New York.

Dated New York, May 6, 1907.

LOUIS HICKS,
Solicitor for Pl'ff in Error.
71 *Nassau Street, New York, N. Y.*

To Stimson & Williams Esqs., Solicitors for def'ts in error, 55 Liberty Street, New York, N. Y.

Endorsed: U. S. Circuit Court of Appeals For the Second Circuit. Leeds & Catlin Company, Plaintiff-in-error, against Victor Talking Machine Co. and United States Gramophone Co. Defendants-in-error. Order of Affirmance and Notice of Settlement. Louis Hicks, Solicitor for Pl'ff in error. 71 Nassau Street, New York, N. Y. Service of a copy of within proposed order and notice on this 6th day of May, 1907, is hereby admitted. Stimson & Williams, Solicitors for Def'ts in error. To —— Esq., for —— Street, New York, N. Y. United States Circuit Court of Appeals, Second Circuit. Filed May 8, 1907. William Parkin, Clerk.

151 UNITED STATES OF AMERICA,
Southern District of New York, ss:

I, William Parkin, Clerk of the United States Circuit Court of Appeals for the Second Circuit, do hereby Certify that the foregoing pages, numbered from 1 to 544, A, and 1 to 150, B, inclusive, contain a true and complete transcript of the record and proceedings had in said Court, in the case of Leeds & Catlin Company Plaintiff in Error *against* Victor Talking Machine Company and another, Defendants in Error, as the same remain of record and on file in my office.

In Testimony Whereof, I have caused the seal of the said Court to be hereunto affixed, at the City of New York, in the Southern District of New York, in the Second Circuit, this 8th day of May in the year of our Lord One Thousand Nine Hundred and Seven and of the Independence of the said United States the One Hundred and thirty-first.

[Seal United States Circuit Court of Appeals, Second Circuit.]

WM. PARKIN, *Clerk.*

152 UNITED STATES OF AMERICA, *ss:*

[Seal of the Supreme Court of the United States.]

The President of the United States of America to the Honorable the Judges of the United States Circuit Court of Appeals for the Second Circuit, Greeting:

Being informed that there is now pending before you a suit in which The Leeds & Catlin Company is plaintiff in error, and The Victor Talking Machine Company and The United States Gramophone Company are defendants in error, which suit was removed into the said Circuit Court of Appeals by virtue of a writ of error to the Circuit Court of the United States for the Southern District of New York, and we, being willing for certain reasons that the said cause and the record and proceedings therein should be certified by the said Circuit Court of Appeals and removed into the Su-

153 preme Court of the United States, Do hereby command you that you send without delay to the said Supreme Court, as aforesaid, the record and proceedings in said cause, so that the said Supreme Court may act thereon as of right and according to law ought to be done.

Witness the Honorable Melville W. Fuller, Chief Justice of the United States, the 28th day of May, in the year of our Lord one thousand nine hundred and seven.

JAMES H. McKENNEY,
Clerk of the Supreme Court of the United States.

154 [Endorsed:] 2909. File No. 20,708. Supreme Court of the United States. No. 743, October Term, 1906. Leeds & Catlin Company *vs.* Victor Talking Machine Co., *et al.* Writ of Certiorari. United States Circuit Court of Appeals, Second Circuit. Filed May 29, 1907. William Parkin, Clerk.

155 United States Circuit Court of Appeals for the Second Circuit.

LEEDS & CATLIN COMPANY, Plaintiff in Error,
vs.
VICTOR TALKING MACHINE COMPANY and UNITED STATES GRAMOPHONE COMPANY, Defendants in Error.

Stipulation.

It is hereby stipulated by and between counsel for plaintiff in error and defendants in error above named in the above entitled suit, which suit was removed into the said Circuit Court of Appeals by virtue of a writ of error to the Circuit Court of the United States for the Southern District of New York, that the record and proceedings in said cause heretofore certified to the Supreme Court of the United States in support of the petition for writ of certiorari herein and on file in the office of the Clerk of the Supreme Court of the United States, shall be taken as the return to the writ of certiorari issued herein upon said petition by said Supreme Court to said United States Circuit Court of Appeals for the Second Circuit.

Dated, May 29, 1907.

LOUIS HICKS,
Counsel for Plaintiff in Error,
Leeds & Catlin Company.
HORACE PETTIT,
Counsel for Defendants in Error, Victor
Talking Machine Company et al.

Endorsed: U. S. Circuit Court of Appeals for the Second Circuit. Leeds & Catlin Company, Plaintiff in error, *vs.* Victor Talking Machine Co. and United States Gramophone Co., Defendants in error. (Copy) Stipulation. United States Circuit Court of Appeals Second Circuit. Filed Jun- 15, 1907. William Parkin, Clerk.

156 United States Circuit Court of Appeals for the Second Circuit.

The record and all proceedings whereof mention is within made, having lately been certified and filed in the office of the Clerk of the Supreme Court of the United States, a copy of the stipulation of counsel is hereto annexed and certified as the return to the writ of certiorari issued herein.

Dated New York June 15, 1907.

[Seal United States Circuit Court of Appeals, Second Circuit]

WM. PARKIN,
Clerk of the United States Circuit Court
of Appeals for the Second Circuit.

157 [Endorsed:] 308, 20708. United States Circuit Court of Appeals, Second Circuit. Leeds & Catlin Co. Pl'tf in Error *vs.* Victor Talking Machine Co. & ano. Def'ts in Error. Return to Certiorari.

158 [Endorsed:] File No. 20708. Supreme Court U. S. October Term, 1907. Term No. 308. Leeds & Catlin Co., Petitioner *vs.* Victor Talking Machine Co. *et al.* Writ of Certiorari & Return thereto. Filed June 17, 1907.

159 Supreme Court of the United States, October Term, 1907.

No. 308.

LEEDS & CATLIN COMPANY
vs.
VICTOR TALKING MACHINE COMPANY and UNITED STATES GRAMOPHONE COMPANY.

Stipulation.

It is stipulated by and between counsel as follows:—

That the record certified herein by the clerk of the Circuit Court of Appeals for the Second Circuit, filed herein with the clerk of the Supreme Court of the United States, which, by stipulation, is taken as the return to the writ of certiorari issued herein, consists of two parts, first, part A, consisting of pages numbered from 1 to 544, and second, part B, consisting of pages numbered from 1 to 150; that said part A consisting of pages numbered from 1 to 544 is identical in every respect with the same pages numbered from 1 to 544 of the record heretofore certified to the Supreme Court by the clerk of the Circuit Court of Appeals for the Second Circuit and filed with the clerk of the Supreme Court of the United States, which, by stipulation, is to be taken as the return to the writ of certiorari issued by the Supreme Court of the United States to the Circuit Court of Appeals for the Second Circuit in a suit in equity between the same parties, No. 307, of the October Term, 1907, of the Supreme Court of the United States; and that in order to facilitate the printing of the record in No. 308 and to avoid unnecessary expense, said part A of the record, consisting of said pages numbered 1 to 544, of No. 308 need not be printed in No. 308, but that the printed copies of said pages Numbered from 1-544 in No. 307 may be used upon the argument of No. 308 as part of the record and proceedings in No. 308, and that only the parts of the record in No. 308
160 other than said pages numbered from 1 to 544 need be printed in the Supreme Court of the United States.

It is further stipulated that an order to the above effect may be entered, if necessary, by either party upon this stipulation without further notice.

Dated July 15, 1907.

LOUIS HICKS,
Counsel for Leeds & Catlin Company.
HORACE PETTIT,
Counsel for Victor Talking Machine Company and United States Gramophone Company.

July 24, 1907.

161 [Endorsed:] Supreme Court of the United States. No. 308—October 1907 Term. 20708. Leeds and Catlin Co. against Victor Talking Machine Co. *et al.* Stipulation as to Record. Louis Hicks Counsel for Leeds & Catlin Co. 71 Nassau St. New York, N. Y.

162 [Endorsed:] File No. 20708. Supreme Court U. S. October Term, 1907. Term No. 308. Leeds & Catlin Co., Petitioner *vs.* Victor Talking Machine Co. *et al.* Stipulation to omit part of record in printing. Filed Aug. 15, 1907.

No. 381.

Office Supreme Court, U.
FILED.
MAY 13 1907
JAMES H. McKENNE
CLE

IN THE

Supreme Court of the United States.

October Term, 1906.

LEEDS & CATLIN COMPANY,
Petitioner,

v.

VICTOR TALKING MACHINE COMPANY, and UNITED STATES GRAMOPHONE COMPANY,
Respondents.

RE PETITION FOR WRIT OF CERTIORARI, SUR CONTEMPT PROCEEDINGS.

Brief on Behalf of Respondents in Opposition to the Petition.

HORACE PETTIT,
Solicitor and of Counsel for Respondents,
604 Stephen Girard Building, Philadelphia.

International, 296 Chestnut St.

IN THE

Supreme Court of the United States.

October Term, 1906.

LEEDS & CATLIN COMPANY,

Petitioner,

v.

VICTOR TALKING MACHINE COMPANY, AND UNITED STATES GRAMOPHONE COMPANY,

Respondents.

RE PETITION FOR WRIT OF CERTIORARI, SUR CONTEMPT PROCEEDINGS.

BRIEF ON BEHALF OF RESPONDENTS IN OPPOSITION TO THE PETITION.

To the Honorable Chief Justice and Associate Justices of the Supreme Court of the United States:

These respondents respectfully oppose the granting of the Petition for writ of Certiorari.

The respondents respectfully show, in opposition to the Petition for the writ of *certiorari*, that the petition relates to contempt proceedings in the Circuit

Court of the United States for the Southern District of New York, and in United States Circuit Court of Appeals for the Second Circuit, based on a preliminary injunction granted in a suit in equity upon Letters Patent of the United States, No. 534,543, dated February 19, 1895, to Emile Berliner; the respondents here being complainants in the lower Court and the petitioner the defendant. A Petition for Certiorari is also presented at the same time with this Petition, by the same Petitioner, asking this Honorable Court to review as well the decree for injunction, heretofore granted in this case, by the United States Circuit Court, affirmed by the United States Circuit Court of Appeals for the Second Circuit. Respondents' Brief in opposition to said Petition is filed under separate cover.

In the United States Circuit Court for the Southern District of New York, Lacombe, C. J., found the defendant in contempt, for violating said preliminary injunction, and imposed a fine of $1000, one half to the United States and one-half to the complainants. (See decision of Judge Lacombe, Record p. 112).

Upon Writ of Error to the United States Court of Appeals, for the Second Circuit, said Court, in an opinion written by Hough, D. J., Coxe, C. J., concurring, affirmed the Order entered in accordance with the opinion of Lacombe, C. J., in the Court below, Wallace, C. J., dissenting.

It is respectfully submitted that this Petition for Certiorari should be denied, among other grounds, for the reasons:

1. There is no question of law involved in this case which has not been previously decided by this Honorable Court.

2. That the main ground upon which the Petitioner presents its Petition, is the dissent of Judge Wallace in the present contempt proceedings, but it is respectfully sub-

mitted that **the error of Judge Wallace's decision lies not so much in his statement of the law as in his misunderstanding of the fundamental durable character of the record disk and the important mechanical function which it has to perform in the combination of the two-element claim.** The decision of this Honorable Court, in the case of Morgan Envelope Co. v. Albany Perforated Wrapper Paper Co., 152 U. S. 430, is not at variance with the decision of the majority of the Court in the present case, but in accord with it.

3. That while in the Morgan Envelope Co. case, the defendant's right to sell the roll of **paper to be used up** in the patented combination was admitted, the principles of law laid down in that case substantiate the decisions, in the present case.

4. That the decisions of Judge Lacombe in the Circuit Court, and of the majority in the Circuit Court of Appeals, in the present case, in no manner extend the monopoly of the patent beyond the patented combination, but merely gives to the owner of the patent the control of the combination of the claim during the life of the patent.

5. That claim 35 of the patent consists of a combination of two elements only—both of which are **vital elements** and of equal importance, viz.: (1) a traveling tablet having a sound record formed thereon, (2) a reproducing stylus shaped for engagement with the record—free to be vibrated and propelled by it. To allow the Petitioner the right claimed by it to manufacture and sell, without license, the traveling tablet, or sound record, to be used, and intended to be used, in the combination, by those who own the reproducing stylus, or other element in the patented combination, and by the method claimed in claim 5, will be to nullify the rights granted under the patent by the government.

6. The reproducing apparatus and the record are each vital elements of the two-part combination. To allow the Petitioner to make and sell the record, one of the elements, would by the same logic and reasoning, allow another manufacturer to make the reproducer, the other element for use in the patented combination, and thus entirely destroy the patent right, and nullify the decisions of the Circuit Court and Court of Appeals sustaining the validity of the patent, after a series of long litigation.

The patent in suit has been before the United States Circuit Court for the Southern District of New York, and the United States Circuit Court of Appeals for the Second Circuit, in several suits, in which it has been sustained, and perpetual and preliminary injunctions isued, against substantially the same infringing device, as follows:

United States Circuit Court, Southern District of New York; Victor Talking Machine Company, and United States Gramophone Company *v.* American Graphophone Company. Final hearing on pleadings and proofs. Hazel, D. J. Perpetual injunction granted. (140 Fed. Rep., 860.)

United States Circuit Court of Appeals, Second Circuit; Victor Talking Machine Company, and United States Gramophone Company *v.* American Graphophone Company. Appeal from decision of Hazel, D. J. Unanimously Affirmed. Re-hearing denied. Lacombe, Townsend and Coxe, Circuit Judges. (145 Fed. Rep., 351.)

United States Circuit Court, Southern District of New York; Victor Talking Machine Company, and United States Gramophone Company *v.* Leeds & Catlin Co. Motion for preliminary injunction. Townsend, C. J. Motion granted. (146 Fed. Rep., 534.).

United States Circuit Court of Appeals, Southern District of New York, Victor Talking Machine Company and

United States Gramophone Company *v.* Talk-O-Phone Company. Motion for preliminary injunction. Townsend, C. J. Motion granted. (146 Fed. Rep., 534.)

United States Circuit Court of Appeals, Second Circuit; Victor Talking Machine Company and United States Gramophone Company *v.* Leeds & Catlin Company. Appeal from decree entered on opinion of Townsend, C. J., granting preliminary injunction. Wallace, Lacombe and Coxe, Circuit Judges. Decree unanimously affirmed. (148 Fed. Rep., 1022.)

United States Circuit Court of Appeals, Second Circuit; Victor Talking Machine Company, and United States Gramophone Company *v.* Talk-O-Phone Company. Appeal from decree entered on opinion of Townsend, C. J., granting preliminary injunction. Wallace, Lacombe and Coxe, Circuit Judges. Decree unanimously affirmed . (148 Fed. Rep., 1022.)

The judgment or decree, which it is sought to have reviewed by this petition, was based on the opinion of the United States Circuit Court of Appeals for the Second Circuit, filed May 2, 1907, in which opinion it was stated after referring to the adjudications of this patent,—

"The claims protected by such adjudications are

> 'a sound reproducing apparatus consisting of (1) a traveling tablet having a sound record formed thereon and (2) a reproducing stylus shaped for engagement with said record and free to be vibrated and propelled by the same, substantially as described.' (No. 35)

and the

> '*Method* of reproducing sounds from a record of the same'

consisting in

> '(1) vibrating a stylus and (2) propelling the same along the record by and in accordance with the said record substantially as described.' (No. 5)

(the 'record' being identical with the 'traveling tablet' above mentioned)."

The preliminary injunction, of which violation is charged, restrained the petitioner here (plaintiff in error in the Court below),—

> "from manufacturing, using or selling, until further order of this Court, sound reproducing apparatus or devices embodying the subject matter of claim 35 of the Letters Patent in suit",

which is the claim first above quoted,

> "And from manufacturing, using or selling, or in any way disposing of apparatus or devices which embody the method specified in Claim 5."

which is the second above quoted claim,

> "And from using or employing in any way the method specified in said Claim 5".

The Sound Record a Most Vital Mechanical Element of the Two Element Combination.

The sound record is a most vital mechanical element of the two part combination. It is a solid disc of hard material having a spirally disposed sound groove, with the sound waves recorded in the sides thereof in lateral undulations, the groove being even depth. The reproducing stylus, the second element of the combination, is shaped for engagement with the record groove, to be vibrated back and forth by the lateral undulations, in a double cam-like action, as the disc revolves, the record thus imparting to the diaphragm of the reproducer the recorded sound, at the same time, the record groove propels the reproducer through the entire length of the spiral groove, from a point near its periphery to a point near the center. **It is thus seen that this record with the double cam-like groove is**

a most vital part of the two-element combination, and is the active fundamental and operative mechanical element in which the reproducing stylus—the other element—is designed to be engaged, and without it the reproducing stylus could not be vibrated or propelled. That Judge Wallace was manifestly in error in his premise upon which he founded his dissenting opinion is clear when he states:

> "It (the sound record) is, however, only a subsidiary part of the machine. Its relation to the machine proper is analogous to that of the **sheet of paper** in the typewriting machine, or the **stalks of corn** in a corn cutter."

If Judge Wallace's statement were the fact, there would be more ground for the dissent: that this understanding is absolutely unfounded is too clear for argument. Judge Wallace has based his whole decision upon an **erroneous premise** that the disc record or traveling tablet, having the spiral groove of even depth with the lateral undulations for vibrating the stylus point in a double cam-like action, was not a vital feature of the patented invention, but was a consumable thing, like a piece of paper to be consumed by a single use, or like stalks of corn to be cut up in a corn cutter.

Judge Wallace has erred, not so much in the application of the law, as in his entire misunderstanding of the fundamental and vital character of this feature of the two part combination. Had he not misunderstood the construction, as found by the majority of the Court, he would have decided otherwise, as he states, *inter alia*:

> "Undoubtedly he (the purchaser of the patented machine) cannot, after his machine has practically ceased to exist for any useful purpose, reconstruct it then by reparation, nor can he reconstruct it by disorganizing it **and substituting as new parts the dominating and vital features of the patented invention."**

As the petitioner has attached to this petition a copy of the brief of this petitioner, (plaintiff in error in the Court below) which was filed in the Circuit Court of Appeals for the Second Circuit, I take the liberty on behalf of the respondents, to attach to this brief and to make a part hereof, a copy of the respondents' brief (defendants in error in the Court below) in reply thereto, in which every point raised by the petitioner, in the Court below, is answered fully and carefully, in the same order in which raised, containing a full index to which this Honorable Court's attention is respectfully invited, and in view of which the present memorandum will be abbreviated.

This Honorable Court will see that the claim 35 of the patent in suit, which has been adjudicated, is or may be termed **"a two-element claim,"** comprising (1) a traveling tablet or record, and (2) a reproducing stylus; the latter being caused to vibrate to reproduce the recorded sounds, and simultaneously therewith to be propelled or traveled across the tablet or record, by and in accordance with the said record, that is to say, by the spiral sound groove of even depth with lateral undulations in the sides thereof in the face of the record, as hereinbefore particularly pointed out. As set forth on page 13 of respondents' brief before the United States Circuit Court of Appeals for the Second Circuit, attached hereto, **the two elements of the claims in question are equally important,** the record tablet being a most vital and important element of the combination of claim 35, and performing a most vital and important function in the combination of claim 5.

The **contempt** with which the petitioner was charged was the sale of the record tablet, one of the two equally important elements of these claims, to be used with the reproducing apparatus manufactured and sold by the respondents, which was the other element of these claims. These

sales being made with the knowledge that said record tablets were to be so used, and with the knowledge, as stated in the opinion of the Circuit Court of Appeals, that the

> "Leeds & Catlin records were knowingly made by the plaintiff in error to enable the owners of Victor Talking Machines to reproduce such musical pieces as they wished, by the combination of the Leeds & Catlin record with said machines:".

that is to say, the reproducers of the respondents, the other element of these claims.

On page 4, of the petition herein, folio 10, petitioner states that the respondents' machine or reproducing apparatus "was so constructed that it was intended that the record to be used thereon for the reproduction of sound could and should frequently be replaced and the sound record was of such character that the destruction thereof was certain, within a very limited period of time, if the sound record was used on the machine for the reproduction of sound." As to the **durability of these disc records,** the attention of this Honorable Court is respectfully requested to the consideration of this feature of the case on page 16, of respondents' brief, in the United States Circuit Court of Appeals for the Second Circuit, attached hereto.

Furthermore the contention by the petitioner that the records are but temporary, perishable and unpatented parts of the patented combination is disposed of by the opinion of the United States Circuit Court of Appeals for the Second Circuit in these contempt proceedings, in the following language:

> "This contention is not supported by the evidence. Disc records are fragile, *i. e.*, brittle and easily broken; but they are *not perishable*, *i. e.*, subject to decay by their inherent qualities, or consumed by few uses or a single one. Neither are they temporary, *i. e.*, not intended to endure; on the contrary we find them capable of remaining useful for an indefinite period, and believe that they usually last as long as does the vogue of the sounds they record." (Italics ours.)

The next contention of the petitioner on page 4, folio 11, of the petition is that the respondents having sold the patented combination without restriction, the purchasers of such patented combinations were entitled to **replace** the record and to purchase such substitute records a most vital element of the **two-element** combination, from others than the patentee, or his licensee, and that the petitioner as a manufacturer has the alleged consequent right to make and sell this most important element, the records—to such purchasers **by the thousand.**

This contention is disposed of by the United States Circuit Court of Appeals for the Second Circuit, in the following language:

> "It is further contended that those who purchase the patented combination in question without restriction, have lawful right to provide themselves with unpatented records made by any person whatever, by way of replacement and repair. We perceive no substantial difference in the meaning of these words. To return to use something injured or lost, or to substitute for something defaced or destroyed, another thing substantially identical, is to repair. The right of general repairing has not been questioned; but what plaintiff in error has done is not to mend or better broken or other records, nor even to furnish new records identical with those originally offered by the Victor Company, but to place upon new discs such other sound records as are thought to command a market, and to induce users of the patented machine *not to replace, but to increase their stock of recorded words and music.*
>
> "The right of repair is measured by the right of the owner of the patented article, and such owner when doing what is above outlined is no more repairing his machine than in one repairing a stereopticon, by changing the pictures therein to suit the whim of the person gazing through it." (Italics ours).

This phase of the question is treated in respondents' brief before the Circuit Court of Appeals for the Second Circuit, which is attached hereto on page 116.

The petitioner's next point on page 4, folio 12, of the petition, criticises the opinion of the Court of Appeals, in holding that the petitioner by supplying the record tablet, one and a vital element of the two part combination of the claims, is **guilty of reconstruction,** contending that this holding is in error, and endeavoring to draw an analogy between the facts of this case and that of the Morgan Envelope Co. v. Albany Paper Co., 152 U. S., 425.

Lacombe, C. J., in the United States Circuit Court for the Southern District of New York, in these contempt proceedings, disposed of this contention in the following language:

> "Nor is the substitution of these new records, *bought more frequently in order to increase the repertory of tunes than as substitutes for worn-out discs* and wholly unlike the toilet paper in Morgan Envelope case (which was destroyed by a single use), in any legitimate sense 'repairs' (see Davis Electrical Works *v.* El. Light Co., 60 F. R., 276)."

The facts involved in the Morgan Envelope case cannot be considered analogous to this case; this is evident by the statement of this Honorable Court in that case as to "the difficulty of treating the paper as an element of the combination at all."

It is plainly obvious that the record is a **vital element** in the combination of the claims in question, the claims **comprising only two elements.** And it is as manifest that the disc sound record, with the sound record groove therein containing the recorded sound waves, is a necessary element, and **the active element required to produce the sounds in combination with the reproducer.** In construing these claims, it is absolutely essential that the record be considered as an element of the combination. Therefore it is thought that the lack of analogy between the facts involved in the Morgan Envelope case and the case at bar, and the non-applica-

bility of the doctrine of the Morgan Envelope case to the facts of the case at bar, are conclusively shown in the following excerpt from the decision of this Honorable Court in the Morgan Envelope case:

> "To repeat an illustration already put: If a log were an element of a patentable mechanism for sawing such log, it would, upon the construction claimed by the plaintiff, require the purchaser of the sawing device to buy his logs of the patentee of the mechanism, or subject himself to a charge of infringement. **This exhibits not only the impossibility of this construction of the patent, but the difficulty of treating the paper as an element of the combination at all."**

Thus, we see in the Morgan Envelope case, that this Honorable Court, although the paper was claimed as an element of the combination, found "difficulty" in treating it as such. While in the patent, upon which this petition is founded, it is submitted, it would be impossible to consider the combination without holding the record as a **vital mechanical element thereof.**

This illustration by this Honorable Court, concerning the log and the sawing device, shows conclusively the error of Wallace, C. J., in the dissenting opinion in the Court below, where he states, referring to the sound record, one element of this combination,

> "Its relation to the machine proper (reproducer) is analogous to that of the sheet of paper in a typewriting machine, or the stalks in a corn-cutter."

The sheet of paper, and the stalks of corn, are obviously in the same category with the log of wood referred to in the illustration of this Honorable Court. To compare a log of wood acted upon by a sawing machine, a piece of paper, printed upon by a typewriting machine, or the stalks of corn cut into sections by a corn-cutter, with the sound record of a talking machine, which is an element that acts upon the

reproducer, and produces the sounds, it is respectfully submitted, conclusively shows the error in the dissenting opinion.

And in the annexed brief used in the Court below, on pages 30, 68, 70 and 83, this Morgan Envelope Co. case is considered at length, and the **differences in the facts** controlling the two cases pointed out, and the attention of this Honorable Court is respectfully called to such portions of the annexed brief, in the desire to avoid repetition here. The facts in the Morgan Envelope case are manifestly not analogous to the present case, for the reason, among others, that in that case, as Lacombe, J., states, the substituted article "was destroyed by a single use."

The decision of this Court in Wilson v. Simpson, 9 Howe, 109, is considered on pages 84 and 100 of respondent's annexed brief, to which the attention of this Honorable Court is called.

Petitioner makes a **false analogy** between the cases of the Morgan Envelope Company, Wilson v. Simpson, etc., and the present case. The replacement of the paper in the Morgan Envelope Company, or the knives in Wilson v. Simpson, is a far different proposition than the use of different sound records on a talking machine. As the Circuit Court of Appeals has said, as above quoted, these talking machine discs **are not temporary,** but are **"capable of remaining useful for an indefinite period, and believe that they usually last as long as does the vogue of the sounds they record."** This is unquestionably true, or, as otherwise stated by Judge Lacombe, these records are **"bought more frequently in order to increase the repertory of tunes, and not as substitutes for worn-out discs."** It is the very essence of the device, that a person having a single reproducing apparatus will probably with it make an original purchase from the complain-

ants of a large number of records, and will constantly increase the number as the records containing new selections are issued, as set forth more at length on page 79 of the annexed brief, these records being made of hard, indestructible material, as set forth on pages 16, 30 and 34 of the brief annexed hereto.

These records as shown may be used hundreds of times without any appreciable deterioration and are not to be compared with the *perishable paper* of the Morgan Envelope case, nor with the knives of Wilson v. Simpson. Their function and use is far different, and the very nature of the use to which the paper and the knives are intended, precludes any idea of an intention that the purchaser would be entitled to replace such element.

Bearing in mind the hard indestructible nature of said records, and the fact that they can be used indefinitely, as held by the Court of Appeals, and are in fact the means to act upon the reproducer, and to vibrate the stylus and propel it across the face of the record, the *error of Wallace, C. J.*, in the dissenting opinion, will be apparent. The learned Judge states (in referring to the record), "*that it is the thing which is to be operated on by the machine proper.*" We think we have shown to the contrary, for the reproducing stylus, the other element of this two part combination, is designed and constructed not to operate, but to be operated by said record tablet, the other element, and the **record disc is the thing which operates on the reproducing stylus to impart to it the lateral vibration, and bodily movement across the face of the record.**

We submit, also, that the prominent part which this disc record plays in the combination of the claims of the patent in question, (its presence being vital to the operative combination) illustrates the error of Wallace, C. J., in the dissenting opinion, wherein the learned judge erroneously states, referring to these disc records, "Its relation to the machine proper is analogous to that of the sheet of paper

in a typewriting machine." A typewriting machine is a complete mechanism, and the piece of paper is only placed therein so that the characters made by pressing the keys can be removed.

A sound reproducer, however, without the record, is a useless piece of mechanism. Without the combination of the reproducer being operatively combined with the record, nothing exists that would reproduce sound. The record is not placed on the talking machine as a sheet of paper in a typewriter to receive something from the reproducer, but is **a piece of mechanism placed thereon to act on the reproducer, and is the operative and most vital element of the combination.**

So, also, is there **error in the analogy** in the dissenting opinion by Wallace, C. J., wherein the learned Judge states that the relation of the sound record to the machine or reproducer "is analogous to * * * * the **stalks of corn** in a corn-cutter." The corn-cutter is obviously a complete and operative mechanism, and passes through the same operation whether or not stalks are fed therethrough. The stalks are not vital to the mechanical operation of the corn-cutter, nor is the sheet of paper necessary to the mechanical operation of the typewriter. On the other hand, however, the talking machine disc is absolutely essential and vital to the mechanical operation of the talking machine, for, without being combined with the reproducer, neither the reproducer nor the record perform any function, nor reproduce sounds.

Therefore, the conclusion drawn on page 5, folio 14, of the petition is upon false premise, for although the inventor has arranged his reproducer and his record with the intention that numerous of his records purchased from him by the user will be used from time to time, it is the very essence of the invention that it should be this way, as the constant playing of one selection would hardly be thought of. This is the peculiar nature of this invention: **the change**

in records is made, not for a repair, but for varying the amusement.

The records do not wear out. But when an inventor produces a device, such as the paper distributing device in the Morgan Envelope Co., case, or the cutter in the Wilson *v.* Simpson case, we have a different proposition, for in these cases the replacement of the paper, or the knives, is not for amusement, but to repair a part which the inventor obviously intended should be repaired when the invention was made.

In the last contention in the petitioner's brief page 6, folio 17, reference was made to Point Two of petitioner's brief in the Court of Appeals. This point is treated on page 99, of the brief attached hereto.

Under this head the petitioner contends that the purchaser of a patented combination has the legal right immediately to *substitute* for an important or essential element of the combination one which he conceives to be *better suited* to his purposes, even though such element was intended to be permanent.

Petitioner's counsel in an attempt to support this proposition (brief, p. 6, folio 17; and p. 60, brief in Court of Appeals), refers to the Trolley Stand decision in the case of Thomson-Houston Electric Co. *v.* Kelsey Electric Railway and Specialty Co., *et al.*, 75 Fed. Rep. 1005. This is a decision of the Court of Appeals for the Second Circuit rendered by Judge Shipman.

The trolley stand, so called, was the means by which the trailing arm was hinged and pivoted to the car, which arm has a capacity for lateral and vertical movement, and is pressed upward by some suitable spring. No particular stand was included in the patent. The defendant sold stands, one of which was purchased and used for the purpose of the infringement complained of.

This case involves a very materially different question,

in that among other things the trolley stand was not the vital element of the combination, such as the respondents' record in suit at bar, and the Trolley Stand case turned upon the doctrine of repairs in cases similar to that of the replacement of the knives in the planing machine in Wilson *v.* Simpson, 9 How. 109, and like cases, the Court distinguishing the Trolley Stand case from the Filament in Davis Electrical Works *v.* Edison Electric Light Co., 60 Fed. Rep. 276. The Court in deciding the right to replace the trolley stand said:

> "It is not intended to permit the unauthorized substitution of the vital and distinctively new part of an invention, in place of one worn out by use, as the substitution of a new filament in the Edison Incandescent Lamp, or the substitution of a new for an old burner in the Wallace case, *supra* (Holmes *v.* Wallace, 9 Blach. 65; Fed. cases, No. 17,100), but the trolley stand is not the vital element of the invention, though a portion of it is an element of the combination. It is the means, and in most cases the non-patented means, for there are numerous forms of these bases by which the pole is permitted to perform its functions."

It also appeared in this case that the purchaser of the trolley stand had a reason for substituting this stand, which was less elevated above the top of the car than complainant's stand, because of the low bridges under which the trolley cars on some of the streets were obliged to go, and that the defendant had a right to sell and the purchaser to use such a stand for the purpose.

In this case his Honor Judge Wallace filed a dissenting opinion, in which he set forth the fact that the defendant had a perfect right to make such an element of the patented combination as a trolley stand, and that the defendant was under no obligation to inquire whether the purchaser intended to make an illegal use of it. In that case there was apparently no evidence that the defendant knew that the trolley stands

were to be used by the defendant in the patented combination, and there was no obligation on the defendant to inquire.

In the case at bar, however, the petitioner sold a most vital element of a two-part combination with the knowledge in one instance that the purchaser, Platz, dealt exclusively in complainant's patented goods, machines and records, and in another case sold to individuals with the knowledge that they were to be used on complainant's reproducer. Bennett's affidavit (Contempt Record, p. 28), states, "I asked him (defendant's salesman) if I could use these (defendant's contempt) records on this Victor Talking Machine (a Victor V) and he told me that I could, and went on further to state that he had at his home a Victor Talking Machine on which he played similar records." Also Thompson's affidavit (Contempt Record, p. 31), states:

> "I then asked said (defendant's) salesman if I could use said records which I so intended to purchase on a talking machine of the manufacture of the Victor Talking Machine Company, and said salesman, in reply to the said inquiry that I could."

He then bought the said records.

Judge Wallace in this connection states, in the above mentioned case:

> "One who assists another to infringe a patent is, of course, a *tort feasor;* and whether he is called a contributory infringer or merely an infringer is only a matter of nomenclature."

Judge Wallace, however, shows that where the evidence of unlawful intent on the part of the defendant is shown in cases of this character there is contributory infringement.

The order in this above mentioned case was particular to state, *"but this permission does not give authority to*

reconstruct or rebuild a combination which has been sold by the complainant."

This case allowed the right to substitute a metal trolley stand, which was a minor element of the combination, for the one purchased from the patentee, as the purchaser, the trolley company, found that the original stand was elevated too high above the roof of the car for convenience in going under certain low bridges.

It will be noted that this was *a substitution,* that is, the old stand was discarded and the new one put in its place. This has nothing to do with the proposition of the purchase of numerous sound records as a means of increasing a repertory.

It is respectfully submitted that there is nothing in this trolley stand case which is in conflict with complainant's position, and that it certainly does not support the defendant's position as regards the present case.

Petitioner Contends it has Right to Substitute or Add 1000 Records.

Petitioner's counsel contends (brief in the Court of Appeals, p. 63), that if the purchaser has the right to substitute one sound record for a sound record purchased from respondent, with the reproducer, he has the right to substitute or add *a thousand records* for use on the reproducer, as well as a single record, for the original one purchased.

This we submit is clear evidence of the extremes to which petitioner's doctrines go, and of the erroneous position which petitioner's counsel has taken.

This is substitution run wild.

The respondents' position is in no manner contrary to the principles laid down in Chaffee v. Belting Co., 22 How., 217, and cases therein cited, but the principles therein stated

are in accord with the principles underlying respondents' contention.

In the present case the respondents' reproducer, which is only one part of the combination, is sold for a price which only relates to the reproducer. Respondents' records, though they may be sold with the reproducer are sold for a distinct, independent price, and the purchaser can purchase as many records with each reproducer from the respondent as he desires to, either at that time or from time to time thereafter. The sale of the reproducer only pays a royalty on that one element of the combination, and it therefore cannot free the other element. The sale of the record at an independent price frees that particular record, but it does not free the other element.

If the sale of the reproducer, one element of the combination, was going to free also the record, the other element of the combination, without a purchase of that element of the combination from the complainant, then the price of the reproducer, in order to give to the complainant its proper reasonable profit for the entire patented combination, would have to be changed and raised.

It is therefore clear that the doctrines of Mitchell *v.* Hawley, 16 Wall., 544, and other cases cited on pp. 65-67 of the brief on behalf of petitioner in the Court of Appeals, have no application, at least as far as this point is concerned, to the case at bar.

Although Judge Wallace referred to the "Trolley Stand" case, in support of the proposition that the petitioner had a right to make the sound records, one element of the two-element combination, yet the majority opinion of the Court of Appeals also cites this case as an authority in passing on this question, and states:

> "We think this contention disposed of by Thomson Houston etc., Co., *v.* Kelsey, etc., Co., 75 F. R.,

> 1005; for the right of substitution there recognized was specifically restricted so as to refuse 'authority to reconstruct or rebuild a combination which has been sold by the complainant'; and whenever a Leeds & Catlin record is placed in a Victor machine the patented combination is instantly reconstructed."

While it may be contended that the unrestricted sale of a patented combination, may carry with it dominion over the article so sold, and may confer upon the purchaser and his vendees the right to hold and deal with it the same as in case of any other description of property belonging to him, yet, we submit, such sales does not confer the right to re-construct. The patent in suit gives the respondents the exclusive right to manufacture the patented combination. The petitioner constructs one of the vital elements of the combination to enable others, who own the other element of the combination, to re-construct this patented combination.

We submit that this question is conclusively answered at the conclusion of the opinion of the Circuit Court of Appeals upon which this petition is based, where it is stated:

> "The true inquiry is whether the owner of a patented combination, the elements of which are durable, unbroken, and in good repair, may buy from the patentee one specimen of a single element,—from an outsider an indefinite number of identical specimens of the same element, and keep and use them all, under cover of the word 'substitution'; it further appearing that the element so procured and used is useful and commercially known only in respect of the said combination.
>
> We think this cannot lawfully be done, and affirm the order below."

For the foregoing reasons, in connection with those stated in the brief before the Circuit Court of Appeals,

attached hereto, it is respectfully submitted that the petitioner is not entitled to the writ of certiorari, and that this petition should be denied.

Respectfully submitted,

HORACE PETTIT,

Solicitor and of Counsel for Respondents.

604 Stephen Girard Building.

Philadelphia, Pa.

May 11, 1907.

IN THE

United States Circuit Court of Appeals

FOR THE SECOND CIRCUIT.

LEEDS & CATLIN COMPANY,

Plaintiff in Error,

(Defendant Below),

v.

VICTOR TALKING MACHINE COMPANY and UNITED STATES GRAMOPHONE COMPANY,

Defendants in Error,

(Complainants Below).

Sur Contempt Proceedings.

Brief on Behalf of Defendants in Error.

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IN THE

United States Circuit Court of Appeals,

FOR THE SECOND CIRCUIT.

LEEDS & CATLIN COMPANY,
Plaintiff in Error (Defendant below).

v.

THE VICTOR TALKING MACHINE COMPANY, et al.,
Defendants in Error, (Complainants below).

BRIEF FOR DEFENDANTS IN ERROR.

STATEMENT.

The Leeds & Catlin Company, being the defendant below, will herein be referred to as the defendant, and the Victor Talking Machine Company, *et al.*, the complainants below, will be referred to as the complainants.

The defendant was sued in equity for infringement of Letters Patent, No. 534,543, issued February 19, 1895, to Emile Berliner, for the Gramophone, the charge being infringement of claims 5 and 35.

Motion for preliminary injunction was made, and granted by Judge Townsend (146 Fed. Rep. 534; Inj. Rec., p. 318). The patent, as to claims 5 and 35, had been pre-

viously sustained, in an opinion by Judge Hazel, in the suit of these complainants against the American Graphophone Company, (140 Fed. Rep., 860; Inj. Rec., p. 63), enjoining the manufacture and sale, and use of identically the same records and reproducing apparatus as the defendant's in the present suit. The decision of the Circuit Court, by Judge Hazel, was, on appeal, affirmed in the Graphophone case, in a *per Curiam,* (145 Fed. Rep. 350; Inj. Rec., p. 73), the Court of Appeals, however, disposing of the question of alleged prior public use, on somewhat different grounds from that adopted by Judge Hazel.

Upon appeal in the present cause against the Leeds & Catlin Company from the decision of Judge Townsend, granting the preliminary injunction, this Honorable Court of Appeals affirmed the decision of Judge Townsend granting the preliminary injunction from the bench at the conclusion of the argument, in an oral opinion by Judge Wallace, not reported. The order, affirming the Court below, is noted in 148 Fed. Rep., 1022.

The following is a copy of the writ of Preliminary injunction, entered in accordance with the decree of October 27, 1906, which was duly served on the defendant October 29, 1906, (Contempt Rec., p. 14, 15), which reads:

"THE PRESIDENT OF THE UNITED STATES

To Leeds & Catlin Company, Its Directors, Associates, Officers, Attorneys, Solicitors, Clerks, Servants, Agents, Workmen and Employees, Greeting:

Whereas, it has been represented to us in our Circuit Court of the United States for the Second Circuit and Southern District of New York, that Letters Patent of the United States were issued upon certain improvements and inventions or discoveries of Emile Berliner, in due form of law, on the 19th day of February, 1895, No. 534,543, for gramophone, and that said Letters Patent were duly assigned to the United States Gramophone Company, and that the Victor Talking Machine Company was duly licensed under said Let-

ters Patent, and that you, the said Leeds & Catlin Company, have infringed the fifth and thirty-fifth claims thereof:

Now, Therefore, we strictly command and enjoin you, the said Leeds & Catlin Company, and your associates, servants, clerks, agents and workmen, and each and every one of you, from manufacturing, using or selling, until further order of this Court, sound reproducing apparatus or devices embodying the subject matter of claim 35 of the Letters Patent in suit, which claim reads as follows, namely:

> '35. In a sound reproducing apparatus consisting of a traveling tablet having a sound record formed thereon and a reproducing stylus shaped for engagement with said record and free to be vibrated and propelled by the same, substantially as described.'

And from manufacturing, using or selling, or in any way disposing of apparatus or devices which embody the method specified in Claim 5 of Letters Patent in suit, which claim reads as follows, namely:

> '5. The method of reproducing sounds from a record of the same which consists in vibrating a stylus and propelling the same along the record by and in accordance with the said record, substantially as described.'

And from using or employing in any way the method specified in said Claim 5."

Counsel for defendant, in his brief, (p. 3), intimates that Judge Townsend, in entering the original decree for preliminary injunction, struck out from a submitted draft certain language which might have made the decree broader. He states that Judge Townsend struck from the proposed form of complainants the words "or which is intended to be operated in accordance with said method of claim 5." The fact is that the defendant submitted a form of decree to Judge Townsend, as also did the complainants. Judge Townsend adopted neither of these forms in its entirety,

employing some of one and some of the other, but made the decree very much fuller, and more comprehensive, than the form submitted by the defendant. It is respectfully submitted that the decree entered by Judge Townsend (contained on page 328 of the Injunction Record) is very broad and far reaching, and unquestionably embodies the entire device. Among other things, the defendant is enjoined from "in any way disposing of apparatus or devices which embody the method specified in claim 5 * * * and from using or employing in any way said method specified in claim 5." It also enjoins the defendant from making, selling or using "*sound reproducing apparatus* or devices embodying the subject-matter of claim 35 of the Letters Patent in Suit." Claim 35 quoted in the decree defines the "reproducing apparatus" as comprising the record and the reproducing stylus.

Pending the appeal from the decision of Judge Townsend granting the preliminary injunction, the writ was stayed upon application of the defendant, upon the condition that defendant enter security in the sum of Ten Thousand Dollars, to indemnify the complainants for damages and profits due for infringement accruing during the period of the stay, which security was entered.

THE ORIGINAL INFRINGEMENT.

The infringement of the defendant complained of was the manufacture and sale of disc talking machine records, for use in combination with the reproducing apparatus, as specified in claim 35 of the patent, and for reproducing sound by the method specified in claim 5; also the manufacture, sale and use of the reproducing apparatus for use

in combination with the disc talking machine record or traveling tablet in the combination specified in claim 35, for reproducing sound according to the method specified in claim 5.

The defendant's infringing records were produced as exhibits, as was also the reproducing apparatus.

Notwithstanding the said injunction, which was served October 29, 1906, the said defendant company, its officers, directors, associates, agents, employes, etc., continued, and have since continued, without license, to make and sell the said infringing disc sound records, identically the same as those which it had been making and selling previous to the said injunction, for use in combination with reproducing apparatus in the combination specified in claim 35, and for reproducing sound in accordance with the method of claim 5, and with the full knowledge that the same were to be so used.

In other words, the defendant company, and its officers, agents, etc., continued its business in manufacturing and selling sound records of the same identical kind, for the same indentical purposes, after the injunction order served October 29, 1906, in the same manner as it had made and sold the same prior to the injunction order, in utter disregard and violation of the said injunction order of this Court.

Notwithstanding the injunction the defendant continued right along in the business of manufacturing and selling records. It never was a manufacturer of talking machines, but sold a few. (See p. 12 of this Brief.)

Upon petition and affidavits of complainants, on November 19, 1906, an order was entered by the Hon. E. Henry Lacombe against the said defendant requiring it to show cause why an attachment should not issue against it for contempt for violating and disobeying said preliminary injunction of October 27, 1906. (Contempt Rec., p. 6 & 7).

The defendant filed an answer, (Contempt Rec., p. 47) and numerous affidavits and exhibits in defence, and on the

thirtieth day of November, 1906, the case was fully heard by the Hon. E. Henry Lacombe, Horace Pettit appearing on behalf of complainants, and Louis Hicks on behalf of defendant.

On January 5, 1907, an opinion was filed by Judge Lacombe, (Contempt Rec., p. 110, etc.) holding the defendant in contempt, and imposing a fine of one thousand dollars, one-half to be paid to the United States, and one-half to the complainants, collection to be suspended, pending appeal. A decree in conformity with the decision was duly entered on the 11th of January, 1907, and on the same day, an order, partially sustaining the preliminary injunction, pending appeal, requiring monthly statements and a bond of Ten thousand dollars, and also an order staying the collection of the fine, pending appeal, were duly entered. (Contempt Rec., p. 112 to 116). An appeal was thereupon taken by the defendant, from the said decree, to this Court.

THE SALES IN CONTEMPT.

The petitioners' affidavits in this proceeding show conclusively the sales since October 29, 1906, by the defendant company, and its officers, agents, etc., at its place of business, No. 53 E. 11th Street, New York City, N. Y.,—its former place of business,—by several different affidavits; of Thomas W. Luck (Contempt Rec., p. 16, 17 and 18), and bill attached, Marked "Luck Bill," who, on November 8, 1906, purchased seven Imperial Records over the counter at said store, at sixty cents each, making $4.20. Also by the affidavit of Charles M. Hemenover (Contempt Rec., p. 19-20), who, on November 9th, 1906, at the same place, purchased five Imperial Records. Also by the affidavit of Charles K. Bennett (Affidavit No. 2), (Contempt Rec., p. 32-33), who shows that on November 7, 1906, at the same place, he purchased two records from the said defendant company, one of which, "King Cotton," No. 45269, he paid

sixty cents for, and for the other of which, "Carmen," No. 15365, he paid $1.50.

All of these purchases above mentioned were made by the purchasers in the ordinary course of business, going into the store of the defendant company, at 53 E. 11th Street, and stating to the salesperson who came to wait upon the respective parties that he wished to buy some records for talking machines. The would-be purchasers were then given catalogues, from which they picked out certain numbers or selections, and told the salesperson which records they desired to purchase. These records were then taken by the salesperson from the defendant's stock of goods, and delivered in each case personally to the purchaser, who then and there paid the price asked for them.

No questions were asked by the defendant's agent or representative, as to what use they were intended to be put, and the said defendant's records were sold in the ordinary course of business, and were, as shown by the affidavit of H. C. Kennedy, contempt Rec. 41, 42 and 43, the same in all material respects as the disc records sold by the defendant prior to the suit, and which the defendant, its officers, etc., were enjoined from selling by the injunction order served October 29, 1906.

The petitioners' affidavits (Contempt Rec., p. 21 to 31) of Albert Platz, George M. Thompson and Charles K. Bennett (Bennett affidavit No. 1) also show purchases in the ordinary course of business by these parties from the defendant, at its store, No. 53 E. 11th Street, New York City, N. Y., in November, 1906, since the date of the service of the said writ. In these last mentioned instances not only were the defendant's said records sold to Platz, Thompson and Bennett in the ordinary course of business, but also with the knowledge that they were to be used in connection with the reproducing apparatus of the Victor Talking Machine of the complainants' manufacture, in accordance with the said patent No. 534,543, in suit, claims 5 and 35.

The affidavit of Albert Platz (Contempt Rec., p. 21-23) shows that on November 4, 1906, he wrote and mailed a letter to the defendant company, addressed to 53 E. 11th Street, New York City, N. Y., on his letter head, a copy of which is attached to his affidavit. This letter head contained in the left hand corner a picture of the Victor Talking Machine Company's trade-mark, "His Master's Voice," the dog listening to the talking machine with the word "Victor" printed thereon; in the center of the sheet are printed the words "Albert Platz, Exclusive Dealer in Victor Machines and Records, 344 Devoe Street, Brooklyn, N. Y., 190 ." This letter was dated November 4, 1906, addressed to Messrs. Leeds & Catlin, the defendant, and stated (Contempt Rec., p. 23 and 24):

> "You will notice from my note head that I am a dealer in Victor talking machines and records exclusively, I would like to handle the Imperial record. Kindly write me and quote dealer prices.
>
> Yours &c.,
>
> ALBERT C. PLATZ."

To this letter, Albert C. Platz received a reply from the Leeds & Catlin Company, dated November 7, 1906, a copy of which is attached to the Platz affidavit, marked "Complainants' Exhibit, Platz Leeds Letter." This letter stated that in reply to the Platz letter of the 4th inst. the defendant enclosed a catalogue of its Imperial Records, and stated (Contempt Rec., p. 24 and 25):

> "We will be pleased to sell you these at 30 cents each F. O. B. Middletown, Conn. They are acknowledged to be the best records on the market, being loud, clear sweet-toned and up-to-date in every respect. The retail price of the Imperial Record is 60 cents each.
>
> "Hoping to receive your order, we remain
>
> "Very truly yours,
>
> "Leeds & Catlin Company,
>
> "By H. Leeds, Jr.
>
> Dictated. Enclosure."

In reply to this last mentioned letter, Platz wrote the defendant, ordering two dozen of the defendant's records, the order comprising two each of a dozen selections which he picked out from the catalogue sent him, and the said Platz enclosed in the said reply a post office money order for $7.20, in payment of said records, which replying letter he mailed with the money order on November 14, 1906.

On November 16, 1906, Mr. Platz personally called at the defendant's store, 53 E. 11th Street, New York City, and introduced himself, and stated that he had written the defendant on November 4, 1906, to which they had replied by the defendant's letter of November 7, and asked the defendant's representative when the defendant would be able to deliver the records which he had ordered by letter of November 14th, and was told that he would probably receive them on Monday, the 19th inst. Mr. Platz then told the defendant's representative that he would like to have the records at once, and asked that he supply him with the said records, and twenty-three of the said records ordered by Platz, by his letter of November 14, 1906, were delivered to him personally at the said store of the defendant, by the defendant's representative, on November 16, 1906, for which he paid the defendant's representative at the time the sum of $6.90, and received a receipted bill therefor, which is attached to the Platz affidavit, marked "Complainants' Exhibit, Platz Bill" (Contempt Rec., p. 26), which records are produced in this proceeding, together with the other records purchased.

The said George M. Thompson, on Wednesday, November 7, 1906, also purchased six of the defendant's said records, for which he paid the sum of $5.35, which are offered in evidence in this proceeding (Contempt Rec., p. 30 and 31). The said Thompson asked the said salesman, at the time of said purchase, whether he could use the said defendant's records so purchased on a talking machine of the manufacture of the Victor Talking Machine Company, to which the salesman replied that he could.

The said Charles K. Bennett, by affidavit No. 2 (Contempt Rec., p. 32 and 33), shows, in addition to other facts, that he accompanied Mr. Thompson on November 7th to the defendant's store on the occasion of this visit, and that after the said Thompson had made the selection of the said defendant's records, Thompson asked the salesman "whether the said records which he had selected could be used on a machine manufactured by the Victor Talking Machine Company, and the attendant told him that they could be so used" (Contempt Rec., p. 31).

The said Charles K. Bennett, also shows, by affidavit No. 1 (Contempt Rec., p. 27, 28 and 29), that on November 7, 1906, he went to the said store of the said Leeds & Catlin Company, No. 53 E. 11th Street, New York City, and told the defendant's representative who waited on him that he desired to purchase Imperial Records, sold by the defendant company, and that the said representative of the defendant company sold him, on this occasion, six of the said defendant's records out of the stock in the establishment, which said records are produced in evidence in this proceeding, marked "Complainants' Exhibit, Bennett-Leeds & Catlin Records, Nos. 1 to 6 respectively." The said Bennett picked these out of the defendant's catalogue, handed him by the defendant's representative, and paid sixty cents each for four of the said records, and one dollar each for two of the same. The said Bennett affidavit also shows that he told the said salesman at the time of the said purchase that he had a talking machine manufactured by the Victor Talking Machine Company, and asked the salesman if these records thus purchased could be used on this Victor talking machine, and was told by the said representative of the defendant that he could use the said defendant's records on the said Victor talking machine (Contempt Rec., p. 28). The said salesman also, on the same occasion, told the said Bennett that he, the said salesman, had at his home a Victor talking machine, on which he played some of the records. The said

salesman handed the said Bennett, on this occasion five catalogues, containing a list of the different disc records of the defendant's manufacture, which catalogues are produced in evidence in this proceeding, attached to said Bennett affidavit No. 1, marked "Bennett, Leeds & Catlin Company Catalogues, Nos. 1 to 5."

It is shown by the petitioners' proofs, we submit, that the defendant is continuing the sale of the infringing records, for the same purposes, in the same manner, as prior to the injunction.

THE INFRINGING APPARATUS THE SAME IN THE LEEDS & CATLIN CASE AS IN THE ADJUDICATED SUIT AGAINST THE GRAPHOPHONE COMPANY.

The defendant contends that as the infringing apparatus, comprising the combination of the reproducing stylus and disc records, both in the Graphophone case and in the Leeds & Catlin case, were substantially the same as the complainants' patented reproducing apparatus and records, and as infringement was not denied, that there was no expression of opinion by the Court as to what constituted an infringement of claims 5 and 35 of the patent in suit.

If the defendant, at the present time, was manufacturing and selling a distinctively different device from that which the defendant in the Graphophone case, or in the injunction proceedings in the Leeds & Catlin case, had been selling, there might be some excuse for suggesting this question, but as the disc records which the defendant continued to sell after the injunction of October 29, 1906, are identically the same as those which it previously manufactured and sold and which it never stopped making or selling for use in combination with the reproducing stylus of the claims, and which it was enjoined from making and selling, there can be no excuse for the raising of this question.

Further, as hereinafter more particularly pointed out, the decision of Judge Hazel in the Graphophone case, affirmed by the Court of Appeals, as well as the decision of Judge Townsend in the Leeds & Catlin case, also affirmed, considers very fully the importance and function of the record, in combination with the reproducing stylus, there can be no room for doubt that the contempt records form an essential part of the combination with the reproducing stylus of claim 35, for operation in accordance with the method of claim 5.

THE DEFENDANT NEVER WAS A MANUFACTURER OF DISC MACHINES, BUT WAS, AND CONTINUES TO BE, A MANUFACTURER OF THESE DISC RECORDS.

The defendant's business, before suit, and which it has continued since the injunction, is the manufacture and sale of disc records. It never manufactured disc machines, but only *sold* a few, which it took in part payment from the Talk-O-Phone Company at one time. (See affidavits of Edward F. Leeds, Inj. Rec., p. 292; Hicks, p. 97, fol. 289; Ensign, p. 99, fol. 295; Irish, p. 283, fol. 849, 850.) This is admitted by defendant's counsel, and not disputed.

It is, therefore, apparent that the Defendant Company is continuing to do the same infringing acts, since the injunction has been served, as before that time, viz., the sale of records forming the material elements of the combination claimed in claim 35, for use in infringement of the method specified in claim 5.

The defendant cannot now say that these contempt records were sold for the purpose of any other use than that for which they were made and sold prior to the injunction.

Not only is the intent of the use to be determined by the acts of the defendant, but it is also clearly shown by these petitioners' affidavits, as herein pointed out.

The defendant is chargeable with the natural consequences of its acts.

Thomson Houston Co. *v.* Ohio Brass Co. 80 Fed. Rep., 712;
Am. & Eng. Enc. of Law, Vol. 22, 2d Ed., p. 463.

THE ELEMENTS OF CLAIM 35 AND THE METHOD OF CLAIM 5.

The defendant seeks to ignore the value and importance of the disc record, or traveling tablet, with the sound record thereon, of claim 35, and to emphasize the greater importance of the sound reproducing apparatus of the said claim. Defendant's counsel states that the sound reproducing apparatus is the vital element. This, however, is a mere voluntary statement on his part, unfounded in fact, and not warranted by the decision of the Court.

The fact is that this disc record, having the lateral undulations representing the sound waves formed in the side walls of the spiral groove of even depth, extending from the periphery to a point near the center, is a most important mechanical element, if not the most important of the combination. Claim 35 is composed of two elements,—the record just described, and the sound reproducing stylus, shaped for engagement with the record, so mounted as to be free to be vibrated and propelled by the record.

It will be seen that the little undulations in the side walls of the spiral groove operate mechanically as a double cam, to pulsate the stylus point back and forth in transmitting the recorded sound waves to the diaphragm, and at the same time propelling the reproducing stylus from the beginning of the spiral groove, near the periphery, to a point near the center.

As to the reproducing stylus, it is only necessary that

it should be shaped for engagement with the record, and so positioned and supported as to be free to be vibrated and propelled by the record.

As fully set forth, and decided in the suit against the American Graphophone Company, the ways in which the reproducing stylus may be mounted, or supported are several; one way is upon a pivoted swinging arm, such as shown in Figure 3 of the patent, in suit, though this is only one way; another way is that shown in Figure 10 of the Berliner Patent, No. 564,856, filed November 7, 1887 (Injunction Record, p. 465), where the stylus and the sound box are supported on a horizontal roller so as to travel across the record disc. Berliner, in the Electrical World of November 12, 1887 (Injunction Record, p. 244), shows that sound may be reproduced from one of these records by holding a sharply pointed bamboo stick between the teeth and pressing the point lightly into the rotating groove, "Or a mounted diaphragm having connected to its center a flat stylus similar in form to the recording one, but of shorter leverage—as shown lying on the table in the engraving (Figure 1, Injunction Record, p. 243) is so placed above the groove that the bent point of the flat spring also presses lightly into the groove. Or a large wooden resonant box is connected to the groove by a stick having an ivory or boxwood point."

"Another way is to mount the phonautogram on a circular, wooden, resonant box, which simply rotates without progressive motion, and to press an ivory point into the groove. In this case the hand which holds the ivory easily follows the groove, and the point is *led* along the volute of the record, and vibrates the sound-box by undulatory shocks." He then also describes the construction similar to that shown in Figure 10 of the Berliner Patent, No. 564,586.

This is merely cited to show that all that is required of a reproducing stylus forming part of the combination with

the record is that it shall be shaped for engagement with, and so mounted as to be free to be vibrated and propelled by the record. As before pointed out, the record disc is a most important and vital mechanical element having the volute, or spiral groove for propelling the stylus mechanically, and the cam like undulations in the walls of each side of the groove for positively vibrating, or "kicking," the stylus point mechanically back and forth, positively, in a double cam like action, while, at the same time, the volute, or spiral groove propels the stylus point.

An examination of claim 35 will show that this disc record, or traveling tablet having a sound record formed thereon is a most important and vital element of the combination.

It also performs a most vital and important function in the method of claim 5.

The claims read:

> "5. The method of reproducing sounds from a RECORD of the same which consists in vibrating a stylus and propelling the same ALONG THE RECORD BY AND IN ACCORDANCE WITH THE SAID RECORD, substantially as described."

> "35. In a sound reproducing apparatus consisting of A TRAVELING TABLET HAVING A SOUND RECORD FORMED THEREON and a reproducing stylus shaped for ENGAGEMENT WITH SAID RECORD and free to be VIBRATED AND PROPELLED BY THE SAME, substantially as described."

This disc record has always been formed in hard, durable material, and they have commonly been identified and referred to as indestructible records. They were originally, at the time of the invention of the patent in suit, formed in metal, such as zinc, and the reproduction being had directly therefrom in the combination of claim 35. They are now commercially made in hard, durable material, such as hard

rubber or like material, having great wearing qualities, being material into which the record may be pressed from the matrix, soft while heated, and extremely hard when cooled under pressure, such as the disc records in evidence in this case.

DURABILITY OF THE DISC RECORDS.

The complainants' hard disc records may be used, ordinarily, as many as 500 times, without any depreciation in tone to the average ear. This is the testimony of A. C. Middleton, an expert, who, as shown by his affidavit, has given a great deal of time and study to the examination and test of these complainants' records (See Middleton affidavit, Contempt Record, p. 45, 46).

Of course, as stated by Mr. Middleton, inferior records, made of inferior material, such as many infringing records, will show wear in comparatively short time, in perhaps 50, or 60 reproductions, or sometimes less. Records can probably be made which will show wear in one or two reproductions, as suggested by some of the defendant's affidavits, and may not reproduce at all.

The complainants' records sold with its machines, and for use upon complainants' machine, are made of the best and most durable material, as stated by Mr. Middleton, (Contempt Record, p. 45).

> "The material of which the complainants' records are and have been made since the complainants have been manufacturing records is of the best and most durable character known to us for this purpose."

The fact is, that complainants' disc records do not, as a rule, wear out for years, if at all, as users of these disc talking machine records usually have a large repertory with different selections. Mr. Middleton shows, (Contempt Record, p. 37), that an owner of one of complainants' disc

machines costing about $25.00 will frequently spend as much as $100.00 for records. Many of the complainants' records are sold at 35 and 60 cents; at this price, the owner would have at least 200 of complainants' records purchased from the complainants. If he paid an average of a dollar a record, which is not probable, he would have at least 100 records. As stated by Judge Lacombe in the decision holding the defendant in contempt, (Contempt Record, p. 111), new records are "bought more frequently in order to increase the repertory of tunes than as substitutes for worn-out discs."

The complainants, as admitted, sell their records with the reproducing stylus, and the purchaser is at liberty to buy then, or later from the complainants, as many of complainants' records as he desires. It is a large part of the complainants' business to manufacture and sell these records for use in reproducing sound on complainants' machines, as shown by affidavits of Mr. Middleton and Mr. Haddon. (Contempt Record, p. 37 and 39).

A repertory of even ten of complainants' records to a machine, which is a low estimate, would mean, before any appreciable wear occurs, 3000 reproductions at 300 to each record. Or at Mr. Leeds' estimate of 60 reproductions to a record, would mean 600 for 10 records before any appreciable wear, and 6000 if the user, as he frequently has, as stated by Mr. Middleton, 100 records.

Mr. Middleton states that from his most careful actual test that 500 reproductions may be had from each record without any depreciation in tone to the average ear; this would mean for 10 records, 5000 reproductions before even any appreciable wear to the average ear; and for 100 records, 50,000 reproductions.

It is also clear that complainants' records are, and may be continued to be used with very satisfactory results, even after some slight depreciation in tone might occur, after 500 reproductions. And the fact is, that these records are

kept and used by the owners of complainants' reproducing apparatus for years.

The fact is, as known by all users of complainants' machines and disc records that the records practically rarely become useless.

It will also be observed that defendant's affidavits of Mr. Bunker, and Mr. Moeller, (Contempt Record, pp. 89-90, and 98-99), in testifying as to the number of reproductions of which a record is ordinarily capable, do not specify that this is true of the material of which *complainants'* records are made. It might be quite possible that records made of inferior material, such as some of the infringing records, would wear in the manner indicated, but this is not true of the complainants' records, as shown by Mr. Middleton's affidavits. The affidavit of Mr. Edward F. Leeds, on behalf of the defendant, (Contempt Record, pp. 62-64), does refer to complainants' records, but it is clear that the tests made by Mr. Middleton, and who is connected with the complainant company, shows him very much better qualified to testify on this point than Mr. Leeds. Mr. Leeds makes several general statements regarding the matter, while Mr. Middleton shows the character of his tests, and at all events, from his intimate connection with the complainant company since its organization in 1901, is better qualified to testify upon this subject.

RE DEFENDANT'S CONTENTION THAT FLAT DISC SOUND RECORDS EXISTED BEFORE THE DATE OF THE INVENTION OF THE PATENT IN SUIT.

Even if this were true, it would be immaterial, as claim 35 is for the novel combination of the record, and reproducing apparatus, so that the latter is free to be vibrated and propelled, and claim 5 is for the novel method; the defendant, however, does not show the statement to be true

that these disc records, having laterally undulating grooves of even depth of the Berliner type were old prior to the date of the invention of the patent, in suit.

The Court of Appeals, of this Circuit, in the opinion in the Graphophone case, (Injunction Record, p. 73), has held that the date of invention goes back to November 7, 1887, the date of filing of the Berliner Patent, No. 564,586, which issued July 28, 1896. The invention of the patent, in suit, was, therefore, made at the time that the record was shown in the Berliner Patent, No. 564,586, and in the Electrical World of November 12, 1887.

RE MECHANICAL FEED.

The defendant spends considerable time, and space, in the consideration of so-called mechanical feed machines.

It is submitted that it makes no difference, in this case, if mechanical feed machines did exist prior to the date of the patent, in suit, if they were not in commercial use at the time of the sales of the contempt records.

The fact that Mr. Berliner showed in his patent, No. 564,586, that he could also reproduce the record on the positive feed recording machine shown in Figure 1, in no manner detracted from his great pioneer invention disclosed in that patent, No. 564,586, filed November 7, 1887, and subsequently claimed in claims 5 and 35 of the patent, in suit, which he had a right to do as decided by the Court of Appeals in the Graphophone case. This fact in no manner detracted from this basic invention which revolutionized the talking machine art, and in which the record became at once the vibrator, and propeller to feed the reproducer, and in the conception and completion of which Mr. Berliner departed radically, from the prior art represented by the graphophone and phonograph..

It is clear, in regard to the so-called "mechanical feed" device, of which so much is made in the affidavits, that no-

where is it shown that the defendant sold any of these so-called "mechanical feed" devices, nor is it shown by any of the affidavits that these so-called "mechanical feed" devices ever have been or are upon the market to-day. There is an entire absence of any proof on the part of the defendant that there is any so-called "mechanical feed" reproducing apparatus upon the market or in general use to-day, upon which the contempt disc records of the defendant company could be used.

There is, however, on the other hand, positive evidence on the part of the complainants, in their moving papers that there is no such so-called "mechanical feed" device to-day upon the market, or in general use, and never has been.

The mere fact that the defendant may have used, at its office, or store, in testing records, a so-called "mechanical feed" device, is no excuse for the sale of these Imperial records since the injunction, with the knowledge that they could be used, and doubtless would be used in connection with the reproducing apparatus forming the other element of the claim of the patent in suit.

Before the injunction the defendant sold the same records for use in combination with the reproducing apparatus of the patent as decided by this Court. In selling since the injunction the records sold would be devoted to the same uses by the purchasers, and the defendants knew it.

As herein shown, the sales of the records to Luck, Hemenover (Contempt Rec., p. 16 to 20) and to Bennett (Contempt Rec., 32 and 33), (Bennett Affidavit No. 2) were made by the defendant without any inquiry as to what reproducing apparatus they were to be used in connection with. The sales to Platz (Contempt Rec., p. 21 to 23) and Thompson (Contempt Rec., p. 30 and 31) and another sale to Bennett (Contempt Rec., p. 27 to 29) (Bennett Affidavit No. 1) were with the express understanding that they were to be used in connection with the Victor talking machine.

In regard to the so-called "mechanical feed" machine, the complainants most strenuously contend that this machine is gotten up as *a mere attempted evasion of the patent in suit;* that it does not evade, and merely contains a superfluous mechanism, which performs no useful function, without which the machine would operate more satisfactorily than with it; and that the defendant is merely making use of this machine as an excuse for selling the records which it was enjoined from selling, contending that if such a machine existed the records they sold might be used with it, and, therefore, even though the records sold should be used in infringement of the patent, the defendant would be excused.

A careful reading of the defendant's affidavits is invited, as otherwise they might be misleading. The attempt appears to be to create the impression that the defendant has been engaged since the injunction in selling the so-called "mechanical feed" device, and in selling the records in connection therewith, and that the so-called "mechanical feed" device of various makes is upon the market. The affidavits, however, do not so state, as will appear upon a careful inspection, and might be misleading in this respect.

The defendant's contempt records were not sold with any label containing restrictions that they were sold for use in connection with the so-called "mechanical feed" device, as intimated in the affidavit of Edward F. Leeds (Contempt Rec., p. 55), and even if the said labels were on the records, it would make no difference, among other reasons, for the reason that the language of the label does not restrict the use of the record to the so-called "mechanical feed" device, but merely states "it is sold for use on mechanical feed machines". None, however, of the Contempt Records had this label thereon.

While it is true, as stated in Mr. Hicks' affidavit (Contempt Rec. p. 103), that complainants' counsel made the statement in the Court on the injunction proceedings, that

he presumed "that the Court does not desire without the benefit of a full discussion to say, upon these motions, whether these so-called 'mechanical feed' machines are, or are not, mere attempted evasions of claims 5 and 35 of the patent in suit", yet the fact remains, as hereafter more fully pointed out, that the defendant's counsel, in his brief in the Court of Appeals, presented a very full argument relative to this question of so-called "mechanical feed" machine, and the effect of the sale of records which might be used thereon. The matter was thus quite fully before the Court in the injunction proceedings. This defence; therefore should not be available as an excuse in these contempt proceedings.

As shown by the affidavits of Mr. Middleton and Mr. Haddon, (Contempt Record, pp. 35 and 40), at the time the Contempt Records were sold, there were in use in the United States, hundreds of thousands of reproducing apparatus of the complainants' construction, designed to be operated in the method of the patent for reproducing sound from disc records similar to the Contempt records, and that said Contempt Records, when sold, could only be used for sound reproduction purposes in connection with this sound reproducing apparatus referred to, which, in combination with the records, forms the subject-matter of this suit.

The mechanical feed machines, in combination with the vertically undulating record of uneven depth represented the prior art, and was the only commercial talking machine before Mr. Berliner's invention, in suit, as has been decided. (See decision of Judge Hazel in Graphophone case, Injunction Record, p. 63.) Judge Hazel, stated, *inter alia*:

> "Concededly, the lateral undulations in the record automatically guide or propel the stylus and diaphragm in its course over the disc from the outer circumference toward the center, and the stylus travels in an apparently direct radial path while at the same instant of time it is pulsated or incited by the sound waves. The principle of operation in the Berliner machine is thought to be essentially different from that of the ma-

chine of Bell & Tainter. In the latter, an auxiliary joint or feed screw was necessary, as already stated, to effectuate the required passage of the record over the point of the stylus, or to cause the stylus and reproducer diaphragm to travel across the surface of the record. In complainants' patent, on the other hand, it is shown that the lateral vibrations of the stylus point and the propelling of the same over the surface of the record without mechanical assistance and through the means of the groove alone was the primary object of the inventor.

* * * * *

"By such adaptation to what is known in the art as a zigzag record (Complainants' Record) certain imperfections in the talking machines were overcome, and sound, when reproduced, was rendered more intelligible. There was, I think, patentable novelty in the method which accomplished the results stated.

* * * * *

"The essence of such claims would seem to include a sound record, which, when in juxtaposition with a diaphragm and stylus propelled in the manner described, is thereby enabled to successfully accomplish the primal object and purpose of the invention."

The very nature, construction and operation of the prior Edison phonograph, and of the Bell & Tainter graphophone, required the positive auxiliary feed screw for propelling the stylus point over the record, or the record past the stylus point, and had many objections, among others, the difficulty of maintaining the proper relation and pitch between the auxiliary screw feed, and the spiral of the record groove so as to keep the reproducing point always in intimate co ct with the record in the groove. The character of Mr. Berliner's invention, obviated all this difficulty, and provided a means and method of always keeping the stylus point in intimate, and exact corelation with the record in the groove, the record groove being at one and the same time, the vibrator and propellor. This was all passed upon, and fully decided in the Graphophone case by this Honorable Court.

RE JUDGE LACOMBE'S DECISION, HOLDING DEFENDANT IN CONTEMPT.

Judge Lacombe's decision, filed January 5, 1907, is on page 110, etc., of the Contempt Record, and holds the defendant in contempt, imposing a fine of $1000, one-half to be paid to the United States, and the other half to the complainants. The decree for contempt is contained on page 112, etc., Contempt Record.

By separate orders, preliminary injunction and payment of the fine was stayed, pending appeal, the defendant, however, being required to enter bond in $10,000, and to file monthly statements.

The decree found that the defendant has violated the injunction by subsequently selling records of claim 35, with the intent that the said records should be used in combination with the other elements of that claim in machines sold by the complainants, or their licensees, combined with such records, for use in carrying out the method of claim 5.

The defendant's counsel seems to think that Judge Lacombe entertained doubt upon the question, by reason of the fact that he stayed the order pending appeal. We understand, however, that this is quite customary in this Circuit, in cases where the appeal may be heard within a reasonably short time after the decree in the Court below, and that no inference of this character is to be drawn from that fact. The contention is certainly not warranted, as stated in defendant's brief, that the question involved in the contempt proceedings was not covered by Judge Townsend's decision on the preliminary injunction. As hereinbefore pointed out, Judge Townsend's decision and decree were so abundantly broad and sweeping as to include the manufacture and sale of these records for this infringing use, as clearly appears from the decision and decree.

The decree (Injunction Record, p. 328) enjoins the defendant from manufacturing, selling, or using "sound reproducing apparatus or devices embodying the subject-matter of Claim 35."

The words "sound reproducing apparatus" are taken from claim 35, and are stated in that claim to consist "of a travelling tablet having a sound record formed thereon and a reproducing stylus—" etc. It is, therefore, clear that the words "sound reproducing apparatus" used in the decree, mean the combination of the traveling tablet, or record disc, and the reproducing stylus. The decree could not be more explicit for the purpose of enjoining the record of this combination, had it specifically used the word "record."

The fact is, however, that it does specifically include the record, as the decree quotes claim 35, which embodies "a traveling tablet having a sound record formed thereon."

The decree also enjoins the defendant from manufacturing, using, or selling, etc., apparatus, or devices "which embody the method specified in Claim 5,"—"and from using or employing *in any way* the method specified in said Claim 5".

The defendant, at the time that this decree was entered and it was enjoined, was engaged in the manufacture and sale of records, not machines, and this was the business which it continued without interruption, notwithstanding the injunction.

A more willful violation could hardly be imagined.

This was also passed upon, very fully, by Judge Hazel in the Graphophone case, affirmed by the Court of Appeals, where Judge Hazel most clearly defined the importance of the record of the combination, and entered a substantially similar decree.

NO DOUBT EXPRESSED IN JUDGE LACOMBE'S DECISION ON CONTEMPT.

Defendant's counsel, in his brief, under the heading of Decree for Contempt, page 13, refers to an alleged statement by Judge Lacombe at the settlement of the decrees relative to an alleged doubt in Judge Lacombe's mind re-

garding his decision. There is no record, whatsoever, to support this statement, and, therefore, it is unnecessary to ask this Court that no consideration be given it.

A careful reading of Judge Lacombe's decision, (Contempt Record, p. 110), does not indicate that there could be much doubt upon the question of the contempt.

Defendant contends that there was no finding that the contempt records sold by the defendant were ever *used* upon any machine of any kind for the reproduction of sound.

The defendant apparently contends that the finding that there was an "intent" on the part of the defendant that the contempt records so sold should be so used, is in error.

It is held by Judge Lacombe, that this was clearly contributory infringement, and requires no serious argument to show that the proof of an "actual use" was necessary where the intent that they should be so used was proven. This intent is clearly shown by several of complainants' affidavits, as hereinbefore pointed out, such as Platz, Thompson and Bennett to whom the defendant sold the contempt records with the knowledge that they were to be used in connection with the reproducing apparatus of the Victor Talking Machine Company.

The Platz letter of November 4, 1906 (Contempt R., p. 23), ordering records of the defendant, specifically stated that he dealt exclusively in Victor talking machines and records, and the said records were subsequently sold to the said Platz by the defendant. (See defendant's reply letter of November 7, 1906, etc., Contempt R., p. 24.)

No further proof, we submit, is necessary. The defendant sold the contempt records over the counter, as shown by complainants' affidavits, in some cases with the knowledge that the purchaser had Victor talking machines, and in other cases without any inquiry as to how they were to be used, but manifestly with the knowledge that there

were no mechanical feed machines in commercial use, and that there were hundreds of thousands of reproducing machines constructed in accordance with the complainants' patent, in use in the country, for which defendant's records were especially adapted.

The defendant, however, does not seem seriously to dispute this proposition, but mainly relies upon the defense that this alleged right to sell, to complainants' purchasers of machines and records, additional records for the purpose of so-called repair, or substitution, or improvement, as set forth in Defendant's Brief.

Defendant relies upon the theory that when complainants sold the patented reproducing apparatus and records to a purchaser, the device, including the combination of the apparatus and records, was released from the monopoly, and that a purchaser had a perfect right, therefore, to buy from unlicensed parties other records forming an essential part of the combination, to add to his collection of the records purchased from complainants for the purpose of increasing his repertory or for practically any other purpose.

The defendant also necessarily contends, that a manufacturing concern has a right to manufacture this essential element of the two essential elements of the combination for use in accordance with the patented method, and to sell the same to the purchaser of such patented combination.

THE DEFENDANT'S EXCUSES FOR SELLING THE CONTEMPT RECORDS.

The defendant on November 28th, 1906, filed an answer and affidavits in reply to complainants' Petition, making a general denial of infringement since the injunction, and bases its denial upon certain excuses for the acts, which we claim were done in contempt of Court.

It is apparent, we submit, from the very nature of the excuses set forth in defendant's affidavits, that they are

strained and untenable, and appear to be devised for the purposes of evading the decree of this Court.

The defendant, in support of its answer, has filed five affidavits, by the following parties, viz: Edward F. Leeds, President of the defendant company; Louis H. Bunker, who says he sold the defendant's records, at defendant's store, since the injunction, but was acting, not as an employee, but as a "friend"; Loring F. Leeds, who does not state how he is connected with the defendant company, or what his relationship to the president is; Leo Moeller, an employee, and Louis Hicks, defendant's counsel. To certain of these affidavits are attached copies of certain advertisements of the defendant, etc., referred to in the affidavits to which they are attached.

The principal excuses presented by the defendant in the attempt to absolve it from the contempt charged, in selling after the injunction the same sound records as it made and sold prior to the injunction, are, in substance:

(1) That the defendant thought that it could sell these disc records, as such records could be used, or might possibly be used, upon a so-called "mechanical feed" talking machine.

(2) That because the complainants had sold large numbers of reproducing apparatus, including a reproducing stylus and the records, the defendant thought it was free to make and sell disc records which could be used on such of complainants' apparatus in the hands of those who had purchased them, on the basis of the so-called doctrine of "repair".

(3) That the defendant excuses its contempt acts on the basis that the record is a perishable, temporary part of the combination, and that, therefore, it had the right, as a manufacturer, to make and sell to purchasers of complainants' reproducing apparatus, disc records similar to the com-

plainants', as a substitute or addition to the complainants' apparatus.

(4) That because the complainants did not place any label on the records or machine, restricting the use of the reproducer to the combination with the complainants' record, and the use of the record to the combination with complainants' reproducer, specified in claim 35, that, therefore, the defendant was free to supply records.

(5) That the complainants' disc record was not patented separately and by itself; therefore, defendant had the right to supply the records for use in the patented combination.

(6) That the defendant had a right to make and sell records for export to foreign countries.

(7) That the complainants sometimes sold the reproducing device without any records being sold with it; that, therefore, there was an implied license to the defendant, or any other manufacturer, to manufacture, and sell records to the purchaser, notwithstanding the fact that a large part of the complainants' business is devoted to supplying the record disc, the other part of the combination of claim 35, which is advertised most widely and known to the world.

It is respectfully submitted that a careful reading of the defendant's affidavits, in connection with the complainants', will show that the defences raised are manifestly without foundation, and are devised for the purpose of evading the decree of this Court, and to relieve the defendant, and its officers, of the contempt charged.

THE DEFENDANT'S ARGUMENT BASED ON A FALSE PREMISE.

The Disc Sound Record or "Traveling Tablet Having a Sound Record Formed Thereon," is Not a Perishable Temporary Part of the Combination.

The argument of defendant's counsel is, throughout the whole brief, based upon the erroneous assumption and false premise, not supported by the weight of the evidence, that the sound record is a perishable, temporary part of the combination, in the same sense that the toilet paper in the case of Morgan Envelope Co. v. Albany Paper Co. is (40 Fed. Rep. 577—affirmed 152 U. S. 425). The defendant's brief practically bases the whole case upon the decision of the Courts in this case just mentioned. Defendant's counsel contends (Def. Brief, p. 16):

(a) That the perishable temporary character of the record is established by the evidence;

(b) That a mere inspection of the reproducing apparatus and consideration of the wear on the record is alone sufficient to establish the point.

Defendant's counsel goes so far as to argue that the testimony of complainants' experts shows that this point is undisputed.

This latter assumption is illustrative of the misleading construction which defendant's counsel seeks to place upon the proofs.

As stated by Judge Lacombe, new records were "bought more frequently in order *to increase the repertory of tunes* than as substitutes for worn-out discs." Judge Lacombe, very properly, also held that

> "Indeed it is difficult to escape the conviction that the larger part of defendant's sales were contrived by them to enable the owners of reproducers purchased

from complainant or its licensees to produce such musical pieces as such owners might desire to hear, through the co-operation in combination with such reproducers of records made by defendant instead of records made by complainant."

He also stated:

"This seems to be a case of contributory infringement—an entirely voluntary and intentional one, not in any wise excused by the circumstance that complainant had theretofore sold reproducers combined with other records to such owners (Am. Graph. Co. *v.* Leeds, 87 F. R. 873)."

It will thus be seen that Judge Lacombe has held that the purchase of new records by owners of the reproducing portion of the combination is principally for the purpose of *increasing the repertory of tunes.* In other words, Judge Lacombe has found that, in the main, the new records are not sold as substitutes for worn-out discs, but "in order to increase the repertory of tunes."

The defendant's counsel proceeds to base the main portion of his argument upon an inference which he draws from Judge Lacombe's decision, that some of the records are sold as substitutes for worn-out records, and attempts to establish what he terms "the fundamental principle of defendant's contention," that the purchaser of reproducing apparatus made and sold by complainant, or its licensees, has the right to substitute new records made by the defendant, for use in the combination of the patent, when the old record is worn out, or useless through any other cause.

Defendant further reasons from this, that the purchaser, if he has the above right, has also the right to substitute a new record for the record originally purchased, as part of the combination, no matter whether the old record is worn out or useless, and that the purchaser has the implied right, having purchased one machine and one record from the complainant, or its licensees, to purchase *a hundred,* or

a thousand records, for use in the combination, from one who is not a licensee.

It will thus be seen that the defendant attains his conclusion from—

(a) A false premise, viz., that the disc record or "traveling tablet having a sound record formed thereon" is a perishable temporary part of the combination; and

(b) If he has the right to repair a worn-out vital element of the combination, he would also have the right, even though this vital element of the combination was not worn out, to make and use hundreds, or thousands, of other records, having the same, or different, selections thereon, forming a vital element of the combination, to increase his repertory of tunes, or for any other purpose.

THE REPRODUCING STYLUS, THE SECOND ELEMENT OF THE TWO ELEMENTS OF THE COMBINATION OF CLAIM 35, A MOST DELICATE ACOUSTICAL INSTRUMENT FOR USE IN REPRODUCING SOUND IN COMBINATION WITH THE HARD DISC RECORD, OR "TRAVELING TABLET HAVING A SOUND RECORD FORMED THEREON."

The defendant, for some reason of its own, has singled out of the combination of claim 35 the disc record, or *"traveling tablet having a sound record formed thereon,"* as a temporary perishable element of the combination, and defendant's counsel (Def. Brief, p. 18) bases his argument upon the unwarranted assumption that the record is more temporary and perishable than the other element, "the reproducing stylus shaped for engagement with said record," which defendant's counsel says "will last indefinitely for years."

The "traveling tablet having a sound record formed thereon," or disc record, is more durable and permanent than could be ordinarily expected by a purchaser of any acoustical instrument, and as shown by the evidence of Mr. Middleton (Con. Rec., p. 46), the **"complainants' record may be played as many as five hundred times without any material depreciation in tone to the average ear,"** and of course after this the records are then by no means worn out, there being only a slight depreciation in tone to the average ear, and may be used for a long time for ordinary amusement and purposes of ordinary use in the home.

Claim 35, a Two-element Combination.

The two elements in this claim are:

(1) "A traveling tablet having a sound record formed thereon"; and

(2) "A reproducing stylus shaped for engagement with said record and free to be vibrated and propelled by the same."

These are the two elements which comprise the "*sound-reproducing apparatus*" of the claim.

This, notwithstanding the statement of Edward F. Leeds, quoted on page 18 of defendant's brief, in support of defendant's position. Mr. Leeds states, *inter alia:*

> "The sound-record is not a part of the sound *reproducing apparatus.*"

With all due respect to Mr. Leeds, claim 35 says that the "*sound reproducing apparatus*" consists of the "*traveling tablet having a sound record formed thereon,*" which is the record, and "a *reproducing stylus* shaped for engagement with said record and free to be vibrated and propelled by the same."

The Court will, therefore, see that we have in this claim 35, which performs the functional method of claim 5, *a delicate reproducing stylus,* which while it may have a substantial, durable mounting, so as to allow it to be vibrated and propelled by the record, is a delicate mechanism as compared with the record formed in hard, durable materials.

Apart, however, from the question of the permanency of the reproducing stylus, mounted to be free to be vibrated and propelled by the record, the *Complainant's Records, sold with its reproducer, and for use on its reproducer, are not of a temporary and perishable character, and there is no reliable evidence in this case to support this proposition.*

As before noted, we are considering *acoustical instruments for reproducing sound, which necessarily are of a more delicate character* than machines for rolling railroad rails, or milling machines, and may be more readily destroyed and injured by abuse and improper use.

RE DURABLE CHARACTER OF COMPLAINANT'S RECORDS.

The durable permanent character of complainant's records is so apparent, from an inspection of the record itself, such as "Complainants' Exhibit, Complainants' Records", that proof of the fact would seem hardly necessary. Complainants, however, in order to avoid ~~any~~ question, have introduced clear and conclusive evidence of this fact.

MR. MIDDLETON'S TESTIMONY AS TO THE DURABILITY OF COMPLAINANT'S RECORDS.

The affidavit of Albert C. Middleton shows that he has made a special study and test as to the durability of complainant's records, from time to time, at frequent inter-

vals, for a period of three or four years past (Middleton affidavit, Con. Rec., p. 44-46). It was Mr. Middleton's object to see that the material of complainant's records was always up to **complainant's standard,** which is the best. Mr. Middleton, as shown, is, and has been Secretary of the Victor Talking Machine Company since October, 1901. He says, in regard to the material of which complainant's records are composed:

> "The material of which the complainants' records are and have been made since the complainants have been manufacturing records is of the best and most durable character known to us for this purpose."

Mr. Middleton shows how he frequently made tests of complainant's records to find out whether the material was up to standard, and whether the material tended to wear in the reproducing of the recorded sound, and says:

> "I often take a record out of our stock as a sample record, and spend practically a whole afternoon and evening continuously testing it on one of our reproducing machines, playing the selection over and over again, to ascertain whether the material of the record disc is kept up to our standard, besides other numerous and frequent tests which I make with different records at different times for like purposes. I have been doing this at frequent intervals for three or four years."

Mr. Middleton also states:

> "As a result of my tests, I can positively affirm that complainant's records can be played 250 to 300 times under ordinary conditions, *without any appreciable wear or depreciation in tone.* This is a very conservative estimate; it is my opinion that complainants' records may be played as many as **500 times without any material depreciation in tone to the average ear."**

Mr. Middleton also shows that some infringing records, may show some wear after being played 50 or 60

times, on account of the poor material used. (Contempt Record, p. 46).

Mr. Middleton also points out that the statement made in Defendant's affidavits, such as that of Leo Moeller, that the stylus cuts and wears down the edges of the surface of the record is very misleading and inaccurate, and shows that the point of a properly formed needle, such as those used by the complainant, is specially ground and shaped so as not to cut the record.

He also shows that the statement of Edward F. Leeds in his affidavit of November 28th, 1906, to the effect that a record can only be played 25 or 30 times, is most inaccurate, if it refers to complainant's records.

The fact that the defendant may manufacture and sell disc records for use in the combination of the patent which *are of inferior material,* and wear appreciably after a few reproductions, has nothing to do with the proposition here involved.

The fact is that complainant's records are of hard, durable material, and will last almost indefinitely without appreciable wear.

It must be borne in mind also, as frequently pointed out and admitted by defendant, that the complainant usually sells with its machines a number of its records, not one record, and that as shown by the affidavit of Mr. Middleton (Contempt Record, p. 37), *the owner of one of complainant's reproducers expends very much less for his machine than he does for his collection of records purchased from the complainant*; that while $25 may represent the price of the machine, the owner of that machine in a short space of time will expend as much as $100 for records, or four times as much for records as for the machine. Mr. Middleton here shows that the revenue, therefore, to the Victor Talking Machine Company from records forming a material element of the combination in suit, is frequently very much larger than the revenue from the reproducer alone.

THE PATENT DESCRIBES HARD DURABLE RECORDS.

As shown by the Berliner Patent No. 534,543, in suit, it was intended that these Berliner records, or "traveling tablet having a sound record formed thereon," should be, and were described to be, of hard, durable material.

The specific record referred to in the patent in suit, No. 534,543, from which the sound was reproduced in the combination of the reproducing apparatus of claim 35, was a zinc disc with a laterally undulating record of even depth etched therein. This record, and the particular method of making it, is described on pages 4 and 5 of the patent No. 534,543, in suit. It states (page 4, line 14, etc.), "a record tablet prepared in the manner described in my aforesaid Letters Patent, is then placed upon the tablet 4 and clamped to the same as hereinbefore described—" The before described Letters Patent referred to are the Berliner record patent No. 382,790, of May 15th, 1888, referred to on page 1, line 15, of the specification.

This patent No. 382,790, was for the process of producing these sound records, which patent states on page 1, line 19, etc.:

> "My present invention is an improvement upon that described in my aforesaid patent; (an earlier patent of Berliner, No. 372,786), and it has for its object the production of a record of sound-waves in solid, resisting material, principally metal, by the process of direct etching; whereby a solid unchangeable sound-record is obtained more cheaply and more readily—"

This Berliner patent No. 382,790, also states, page two, line 30, etc:

"From a record produced in the manner described any number of copies may be obtained by electro-deposition, especially when the original record is etched in metal. In that case, however, it is found it is advisable to burnish the original record groove before the plate or cylinder is placed

in the depositing bath. This is a very simple process, and consists in holding and gently pressing a pointed burnishing tool in the record groove while the plate or cylinder is rotated."

It is thus seen from the specification of the patent in suit, No. 534,543, and from the Berliner Patent No. 382,790, referred to in the patent in suit, that the "traveling tablet having a sound record formed thereon", or record disc, of claim 35, was intended to be *a durable, substantial record*, and was and is such.

By reference also to the Berliner patent No. 548,623, the record claims of which were adjudicated by Judge Hazel in Victor Co. *v.* American Graphophone Co., (140 Fed. Rep., 860) to be confined to hard rubber, it is seen that Mr. Berliner always contemplated that these records, with the laterally undulating groove of even depth, should be made in *hard, durable material.* These records were what are called duplicate records, being pressed from a matrix of the original record in this hard rubber like material. While these record claims of the Berliner patent No. 548,623, specify hard rubber, the specification in referring to other materials which could be employed ,referred only to hard, durable materials, among others celluloid.

If the complainant had sold wax disc records of the zig-zag type, the defendant would have more ground for its contention that the complainants' records were perishable and temporary.

MR. KENNEDY'S TESTIMONY AS TO DURABILITY OF COMPLAINANTS' RECORDS.

In this present suit, on the motion for preliminary injunction, Mr. Kennedy, complainant's expert, states (Injunction Record, p. 60), in reference to the record exhibits in this case, that the record discs are *"made of hard in-*

destructible material, in the faces of which are impressed a spiral record groove of even depth with lateral undulations." Mr. Kennedy also shows that the record exhibits in the case of Victor Talking Machine Co. *v.* American Graphophone Co. (140 Fed. Rep. 860), affirmed by this Honorable Court (145 Fed. Rep. 350), were also made "of hard material having in its face a spiral groove of even depth with lateral undulations."

The affidavit of Albert C. Middleton on behalf of complainants in the injunction proceeding in this present suit (Injunction Record, p. 51), states that "Complainant's Exhibit, Complainant's Sound Record, is a flat disc of *indestructible material,* in the face of which is a spiral groove of even depth having lateral undulations representing the sounds to be reproduced."

Judge Hazel in rendering the decision in Victor Co., *et al., v.* American Graphophone Co. (Injunction Record, p. 67), showed that Berliner's process of recording and reproducing, such for instance as described in the Berliner patent No. 564,586, differed essentially from the phonograph and graphophone, and states:

"The specification described a process by which the sounds were inscribed upon a layer of non-resisting material; which was afterward copied in *non-yielding material,* from which the sounds were reproduced."

THE TESTIMONY BEFORE THIS COURT IN THE AMERICAN GRAPHOPHONE CASE RE DURABILITY OF THE RECORDS.

As shown by Mr. Kennedy's affidavit in this case (Inj. Rec., pp. 60-61), the Complainants' Exhibit, Complainants' Sound Record in the case at bar, and the complainant's and defendant's sound records in the suit against the Amer-

ican Graphophone Company, cited by this Court of Appeals, (145 Fed. Rep. 350), are the same, and made of *hard, indestructible material.*

In the said American Graphophone case, the evidence of Joseph Lyons, which was before this Court in that case, shows that the complainant's sound records were made in hard, resisting material. He shows, (Transcript of Record, p. 19, American Graphophone case) that Mr. Berliner deviated from prior processes, and, among other things, formed the record in hard, resisting material.

On page 27, Mr. Lyons, shows that the record tablet exhibit in the American Graphophone case is "a record tablet consisting of a flat disc of hard, resisting material. * * * This sound record tablet is a circular disc of hard black material, which has on its upper face a laterally undulating spiral groove of even depth."

Mr. Lyons shows, (on pp. 27, 29 of Transcript of Record, American Graphophone case) that the complainant's records and defendant's records are exactly the same.

Mr. Lyons also states, in referring to Mr. Berliner's invention (XQ. 13, p. 34), that Mr. Berliner started with a Scott Phonautogram, and his first proposal was to reproduce that in hard material by process of photo-engravings.

In the case of Victor Talking Machine Co. *v.* American Graphophone Company, suit on Berliner hard rubber record patent, No. 548,623 (145 Fed. Rep. 189), (referred to in Mr. Hick's affidavit, Contempt Record p. 104), recently affirmed by this Honorable Court of Appeals, the Court said, as to the exhibit records:

> "The sound records which were claimed to infringe complainants' records were manufactures of shellac and heavy earthly material covered with lamp black; in appearance they were similar to the sound records in suit. The substances used by the defendant in the manufacture of sound records are claimed by complainants to be the equivalent of hard rubber."

The Court of Appeals, in the decision of Judge Townsend, affirming Judge Hazel, in this connection said, referring to defendant's records:

> "Defendant's material, which is a manufacture of earth and shellac is similar to hard rubber of the claims in the fact that it is impressible when soft and *hardens when cold.*"

The testimony of Mr. Lyons in this case, in referring to the defendant's disc record, said:

> "The material is not only hard, so hard as to exclude the possibility of cutting the sound grooves into it—".

Mr. Lyons was showing that the sound groove was pressed into the material while heated, which became hard upon cooling under pressure.

RE DEFENDANT'S AFFIDAVITS.

The affidavit of Edward F. Leeds is the only one which states that the material of which *complainants'* records have been made wore perceptibly in the reproduction of the sound.

The attention of the Court is particularly asked to the affidavits of the defendant upon which defendant's counsel bases his contention that the complainant's records are perishable and temporary. The defendant's counsel bases his contention upon three affidavits; one of Edward F. Leeds (Contempt Record, pp. 62 to 64; Defendant's Brief, p. 18); the affidavit of Lewis H. Bunker (Contempt Record, p. 87; Defendant's Brief p. 21); and the affidavit of Mr. Leo Moeller (Contempt Record, p. 96; Defendant's Brief, p. 21).

A careful reading of the portions of these affidavits, quoted in the Defendant's Brief, shows that Edward F. Leeds, the President of the Defendant Company, is the only witness who swears that *complainant's* sound records could be used only a very limited number of times for reproducing sound. This witness is the only witness who swears to this effect regarding *complainant's* sound record.

This is the only witness who swears that complainant's records, after a few playings, become gray in appearance, showing that the friction of the needle has chipped off the edges, cut into the smooth finish of the surface, and otherwise wore out the material. This witness Leeds also makes the false and unwarranted statement that in complainant's records, the deterioration rapidly increases until soon the record is useless.

The worthlessness of this witness' statements is also illustrated by a further statement made (quoted on page 20 of Defendant's Brief), regarding the records of one of this complainant's competitors, the American Graphophone Company, wherein he says:

> "Records made by Complainants' licensees, the American Graphophone Company, ordinarily cannot successfully be reproduced more than twelve or fifteen times and the same is true of similar records made by the American Record Company."

That this is untrue is apparent from the most casual examination of these records. These disc records of the American Graphophone Company have been before this Court frequently, and were in evidence in the suit of the Victor Co. *v.* The American Graphophone Co.

The character and value of this affidavit may be judged from these statements:

This Court will observe in reading Mr. Leeds' affidavit, that while he states that certain disc records will wear out in 35 or 30 reproductions *unless made of proper ma-*

terial, he also says that often a single reproduction, or two or three reproductions, will destroy a record by reason of the quality of the material, and that sometimes records become useless after being played ten or twelve times. *He does not make these statements against complainant's records.* He says that in exceptional cases the records can be played as often as 50 or 60 times. He does not here state that this is the limitation on complainant's records.

The attention of the Court is also called to his statement that it takes but a minute, or two, to play a record. Therefore, according to his statement one of these records would be worn out in an hour, or at most two hours, if played continuously.

The fact is that these complainants' records are practically indestructible, and last well for years with ordinary care.

Of course, a record may break or become destroyed by accident, which is liable to happen to any patented construction. It is also true that a record may be destroyed by a sharp tool improperly used. A hatchet would be a very good thing for this purpose.

Another thing Mr. Leeds states against the record is, "Another reason why the record is intended to be but a temporary part of the machine, is that after the record has been played several times *it becomes tiresome.*"

Mr. Leeds, however, (Defendants' Brief, bottom of page 20), refers to the problem which complainant has solved. He states:

> "Hence one of the problems in the record making art is to secure a material so perfect that it will withstand the friction of the needle a greater number of times."

The complainants, as shown by the affidavit of Mr. Middleton, (Contempt Record, p. 45), have solved this problem of securing the best and most durable material.

Edward F. Leeds, President of the Defendant Company, in Contempt, in American Graphophone Co. v. Walcutt, et al.

Judge Wheeler, of this District, in the case of the American Graphophone Co. *v.* Walcutt, *et al.*, 86 Fed. Rep., p. 408, held Cleveland Walcutt and Edward F. Leeds in contempt in violating the injunction order of this Court, in that case restraining Walcutt, *et al.*, from infringing the Bell and Tainter Patent, No. 341,214, and the Tainter Patent, No. 341,288, by making and selling cylindrical talking machine records.

The defendants committed the acts in contempt as officers of a corporation organized while the original case was under advisement, but the Court held that that did not make their acts any less a violation of the injunction. In the contempt proceedings in that case, Edward F. Leeds, now the President of the Leeds & Catlin Co., and Cleveland Walcutt, contended that because they bought a licensed recording machine they had a right to duplicate a record made on this recording machine which duplicated records were made in accordance with the claims of the patents which they were enjoined from infringing. The Court held them guilty of contempt.

RE AFFIDAVIT OF LOUIS H. BUNKER.

(Contempt Record, p. 89; Defendant's Brief, p. 21).

It will be noted that this portion of Mr. Bunker's affidavit quoted in Defendant's Brief is the only portion which refers to the question of durability of sound records, and that *nowhere in his affidavit is any reference made to complainant's records.* The statement of Mr. Bunker is a general statement, and nowhere specifies the character, or durability, of *complainant's* records. Mr. Bunker states, "Often from 10 to 15 reproductions will wear out and destroy the

record." *He does not say that this is true of complainant's record*; it is possible that some records might be so constructed in conjunction with some machine as to wear out and become useless in that time, especially if it was intended for the purpose of wearing out.

The character and value of Mr. Bunker's affidavit may be judged from the statement, "it is the practice to replace the record after one or two playings."

If Mr. Bunker means by this that the custom is to change the record for the purpose of hearing another selection after one or two reproductions, he may be right, but it is hoped that the Court will not be mislead by this statement.

If he means that the records are usually replaced after one, or two, playings, because they are worn out, of course, the statement is ridiculous.

RE AFFIDAVIT OF LEO MOELLER.

This affidavit is contained in the Contempt Record, p. 96, and the portion relating to the durability of a record quoted in Defendant's Brief, p. 21. The portion quoted in Defendant's Brief is the only portion referring to the durability of the records. Like Mr. Bunker, this witness makes *only a general averment*, that flat disc records generally are of a temporary character, *without any specific reference to complainant's records.*

He says that the "lasting qualities of the flat disc sound records having lateral undulations depends upon the material of which the tablet is composed, and upon the perfection of manufacture of the record." This may be quite true, but his following statement is absolutely inconsistent when he says, "All such records are made substantially today of the same material." It is shown by defendant's other witnesses that the materials, at least as to their lasting

qualities, vary very widely. *This witness, as before stated, does not specify complainant's records, and nowhere states anything regarding the durability of the material of which Complainant's records are made.* He thinks that a record might be destroyed the first time it is played.

He also states that it might be played thirty times, and that often ten or fifteen reproductions will destroy a record. He also states that records may be played from fifty to sixty times.

As before noted, not one of defendant's affidavits, outside of Edward F. Leeds', makes any direct reference to complainant's records, and not one of defendant's affidavits, except Leeds', denies the complainant's proofs that complainant's records are made of hard, indestructible material, and may be reproduced, as many as 500 times without the average ear detecting any material depreciation in tone.

The durability, and practical indestructibility, of complainant's records was one of the features of this gramophone type of reproducing apparatus which particularly was called to public notice at the time they first came into use, as distinguished from the wax like records of the phonograph and graphophone.

USUALLY A NUMBER OF COMPLAINANT'S RECORDS ARE SOLD WITH COMPLAINANT'S REPRODUCER.

We have been considering the great durability and life of a single record. When, however, we take into consideration the fact, which is not denied by the defendant, and which is proven by complainant's affidavits, that each purchaser of complainant's reproducer usually buys with the reproducer a number of complainant's records for use in the combination of claim 35, in carrying out the method of claim 5, we find the durability and permanency of the combined apparatus increased in very large proportions.

Mr. Middleton says (Contempt Record, p. 37):

> "A purchaser of the machine or reproducing apparatus for use in reproducing from the record, frequently expends very much less for the machine than he does for his collection of records, as records are being constantly purchased by the purchaser of a machine from time to time—".

Mr. Middleton also shows that while a purchaser may expend $25 for a reproducer, in a short space of time he will frequently expend at least $100 for records. If the records cost $1.00 apiece, under these conditions the purchaser would have 100 records, and if each record, as Mr. Middleton testifies, is capable of at least 500 reproductions before even any deterioration in tone to the average ear, the purchaser would have complainant's patented apparatus capable of reproducing at least *fifty thousand reproductions* before any perceptible deterioration. A popular price of records is fifty cents, and some of them are sold at thirty-five cents. If sold at fifty cents the purchaser making an expenditure of $100 for records would have 200 records, capable of 100,000 reproductions before any appreciable deterioration. This would represent almost a lifetime as far as the durability of the records was concerned, as a user of a talking machine, while he may play it a great deal, does not play it all the time.

THE WEIGHT OF THE EVIDENCE.

We see from the weight of the evidence that the complainant's records are made of practically indestructible material, and that even a single record is capable of almost indefinite use without any depreciation in tone to the average ear.

If there is no depreciation in tone to the average ear for 500 reproductions, *it follows that the same record may be*

used almost indefinitely for ordinary amusement purposes. The purchaser of a dozen of complainant's records with complainant's reproducer, forming the combination of claim 35, would have an extensive reportoire, lasting for several years, unless the records were abused, and abuse will destroy any device. Increase his reportoire by the additional purchase of complainant's records to 25, 50 or 100 and, as before stated, his records will last for an indefinite period.

There are very few patented combinations in the musical class which will give longer wear, and more durable results and satisfaction than this combined reproducing apparatus of claims 5 and 35.

As stated by Judge Lacombe in deciding this Contempt proceeding (Contempt Record, p. 111), new records are "bought more frequently in order to increase the repertory of tunes than as substitutes for worn out discs."

RE ALLEGATIONS CONTAINED IN DEFENDANTS' AFFIDAVITS GENERALLY. — BRIEFLY REVIEWED.

Affidavit of Edward F. Leeds (Contempt Record, page 50, etc.).

Mr. Leeds shows, among other things, that he is the president of the defendant company, and that the right to sell sound records, independently of the reproducing apparatus, was not passed on in the prior suits; he says that the Leeds & Catlin Company never manufactured talking machines, but was exclusively a manufacturer of sound records. He says that the talking machines which the defendant sold prior to suit brought were some Talk-o-phones which the defendant company had purchased from the Ohio Talking Machine Company. He shows in substance, that the defendant company is manufacturing only records now, which is the same business it was engaged in before the in-

junction. He alleges that the defendant discontinued *the use* of all sound reproducing machines, except "mechanical feed" machines, after the injunction. He says that on October 15, 1906, the defendant bought one hundred mechanical feed machines from the Talk-o-phone Company, Contempt Record, pages 52 and 53, which was three days after the decision of the Court of Appeals.

While Mr. Leeds, Contempt Record p. 52, says that the defendant began to use and sell its sound records in connection with the feed device machines, there is nothing in the affidavit to show that the defendant ever sold such machine, or that any such machines are on the market. Whether he had seen such a machine, and may have owned such a machine is, of course, another question. Mr. Leeds does not deny that the records were sold over the counter since the injunction, similar to the records sold prior to the injunction, without inquiry as to how, or on what machine they were to be used except in a general way, nor does he deny that since the injunction sales were made to the purchasers set forth in Petitioners' affidavits. He says that he was advised by counsel, Contempt Record, p. 53, that the "mechanical feed" machines were not an infringement. Mr. Leeds also states that the defendant had purchased necessary tools for the manufacture of "mechanical feed" devices similar to the Talk-O-Phone, Contempt Record, p. 53, and is now engaged in manufacturing such machines for use and sale, but does *not allege any definite sale*. Mr. Leeds also states that the Talk-O-Phones have been extensively advertised, and that he once saw a "mechanical feed" machine in the Imperial Hotel, in November, 1905. Contempt Record, p. 54.

He also shows that since the injunction the defendant has advertised its records in the New York Herald, of November 23, 1906, and in the Talking Machine World of November 15, 1906, Contempt Record, p. 84a, and refers in said advertisements to some kind of a "mechanical feed"

machine. The attention of the Court is directed to these advertisements, as they are misleading, and are evidently gotten up for this purpose. In neither of these advertisements does the defendants state that these machines *are on sale*; a reference to them is incorporated therein manifestly for the purposes of excusing its advertisements of its records.

Mr. Leeds also refers to a label which he says defendant had adopted "and is now putting upon its sound records, * * * stating that the record is sold for use on mechanical feed machines". Contempt Record, p. 55. The Contempt Records, produced by the complainants, did not have these labels thereon, and Mr. Leeds does not state that they have as yet been put upon the records, but does say: Contempt Record, p. 55.

> "Very likely the employees of the Leeds & Catlin Company had not had sufficient time to put the annexed label upon said records—."

A considerable portion of Mr. Leeds' affidavit is devoted to his prior knowledge of graphophones, and phonographs, and gramophones, and devices having mechanical feeds. Mr. Leeds also states Contempt Record, p. 57, that "The Valiquet Company, of 50 Columbia Street, Newark, New Jersey, is preparing to manufacture and sell disc talking machines employing disc sound records having lateral undulations and a mechanical feed device—." He does not, however, state that they are on the market.

While Mr. Leeds' affidavit denies the statements in certain of complainants' affidavits, to the effect that the disc sound records, such as defendant's disc sound records, can only be intended for use in combination with reproducing apparatus or machines, such as complainants', he does not point out, or testify, that there is any reproducing apparatus upon the market, or in general public use, upon which defendant's Contempt Records could be used. He makes a

general statement that such sound disc records have been continuously used from a date prior to the invention of the patent in suit down to the present time upon mechanical fee device, machines, but he fails to specify where, or how, or how many of the same he has seen, or are on the market. It is a mere general statement, upon which no reliance can be placed, Contempt Record, p. 57. He also says that many of the defendant's records are sold for export, Contempt Record, p. 59, but that, of course, has nothing to do with those which are not sold for export.

He also claims that the sale of a reproducing apparatus by complainant implies a license to the purchaser to use infringing records. Contempt Record, p. 61 and 62. Mr. Leeds also claims that the records are perishable, and have to be renewed, and can only be used a comparatively limited number of times, as before considered. Contempt Record, p. 63 and 64.

Mr. Leeds, the president of the defendant company, admits that the defendant and its officers have been advised by counsel, Contempt Record, p. 65, "that it cannot sell sound records to be used to complete an infringing machine, and that it cannot do any act, which, taken in connection with the act of another person, not acting under authority of the complainants, could constitute an infringing act."

As shown, the defendant company,, and its president, have willfully, violated this advice by selling records since the injunction, with the knowledge that they were to be used in an unlicensed manner, as hereinbefore pointed out.

Mr. Leeds makes reference to the date of "November 4th", Contempt Record, p. 66, of a letter referred to in the Platz affidavit. It is clear that this date should have been November 14th, which is the date of the letter containing the order referred to, and not November 4th, a mere clerical error. The fact is that Platz ordered the goods, and they were sold to Platz as set forth in his affidavit.

The very facts of the case, as shown by the proofs, make it appear clearly that the defendant was wilfully negligent in its acts relative to the injunction, and that the contempt sales were not inadvertent.

Re Affidavit of Louis H. Bunker (Contempt Record, pages 87, etc.).

A large part of Mr. Bunker's affidavit is devoted to trying to prove that he was the party who waited upon Messrs. Bennett and Thompson, at the time of purchase of the Contempt Records, referred to in Bunker's affidavit, and that he was not an employe, or servant, or official of the defendant company, and that what he said, therefore, did not bind the defendant; he attempts to show that the conversations with Bennett and Thompson were not correctly reported. A careful reading of this affidavit is requested, as we submit it very clearly illustrates some of the devices and designs of the defendant company in its efforts to free itself of contempt, after the contempt acts have been committed.

The facts set forth in the affidavit of Mr. Thompson, on the occasion of the joint visit of Thompson and Bennett to the defendant's store, relative to the purchase of the contempt Records, is fully corroborated by Mr. Bennett. It is submitted that Bunker's excuse that he was not an employe of the defendant company, though he undertook to act for it, relative to the sale of the goods in the defendant's store, is a very suggestive one. He admits contempt Record p. 88, that Bennett and Thompson did ask him whether the defendant's records could be used on machines of the manufacture of the Victor Talking Machine Company. Thompson testifies relative to this inquiry,—"The salesman from whom he purchased the goods on the occasion referred to, said that they could be used on such machines." Bennett also corroborates this, in his affidavit No. 2.

The Bunker affidavit also refers to an alleged under-

standing by some that a purchaser of a Victor Talking Machine, was at liberty to purchase infringing records. While Bunker also refers to the so-called "mechanical feed" devices, he nowhere testifies that such machines were or are on the market, or in general use.

Re Affidavit of Loring L. Leeds, generally (Contempt Record, pages 92, etc.).

Mr. L. L. Leeds states that he agrees with the statements made by Mr. E. F. Leeds, S. H. Bunker and Leo Moeller. He refers to the so-called "mechanical feed" machine of the Valiquet Novelty Co., stating that he is informed by officers of that Company, that they are prepared to manufacture, and sell, a "mechanical feed" device, though he makes no statement that such machines have been sold, or on sale. He refers to the prior art, which is a matter that has been passed upon on the motion for preliminary injunction, and also refers to the facts that some of the defendant's records are sold for export. He, nowhere, states, however, that the so-called "mechanical feed" device is on the market, or on sale.

Re Affidavit of Leo Moeller (Contempt Record, pgs. 96, etc.).

Mr. Moeller shows that he is employed by the Leeds & Catlin Co., and states that flat disc records could be used on a "mechanical feed" device, and treats, somewhat at length, on recording machines for disc, and cylindrical, records having a feed screw, and also refers to the Edison and Bell & Tainter patents, which were in evidence, and were fully considered in the Graphophone case, and in the motion for preliminary injunction in this case, and in the Talk-O-Phone case. He says he has seen a "mechanical feed" device, but nowhere states that such a machine is upon the market, or in general use. He says further Contempt Record, p. 98, that the Valiquet Novelty Co., has recently offered to manu-

facture these "mechanical feed" devices for the Leeds & Catlin Co. He also shows that some of the defendant's records are sold for export.

Mr. Moeller also attempts to show that the disc records wear out very easily, though he admits that their "durability depends upon the material of which the record is composed, and upon the perfection of manufacture of the record." It is well known that disc records made in proper material, such as the complainants', will stand, without appreciable wear, even a couple hundred of reproductions.

The affidavit of Mr. Moeller also refers to the contentions made in the other affidavits, that purchasers of complainants' licensed reproducing apparatus has a right to use infringing records.

Re Affidavit of Louis Hicks (Contempt Record, pages 100, etc.).

Mr. Hicks, who is counsel for the defendant, refers Contempt Record, p. 100-101, to the infringement in the suit against the American Graphophone Co., and also to Judge Hazel's reference in his opinion, in that case, to the Bell & Tainter patent, which, we submit has no bearing upon the question now involved, as questions of alleged anticipation had been disposed of.

Mr. Hicks contends that the question of infringement, in the case of the American Graphophone suit, was confined to the making, using and selling of machines and sound records, and in this case was confined to the sale, by the defendant, of an unlicensed machine, with sound records for use thereon, and that the question of the sale of records alone was not adjudicated before.

While counsel for complainants, as stated by Mr. Hicks, Contempt Record, p. 103, did set forth in his brief on the motion for injunction, that he presumed "that the Court does not desire, without the benefit of a full discussion, to say, upon these motions, whether these so-called "mechanical

feed" machines are, or are not, mere attempted evasions of claims 5 and 35 of the patent in suit", yet, as herein pointed out, in another portion of this brief, the defendant's counsel, in the Court of Appeals, very fully presented an argument in his brief, similar to that which he now here presents, regarding the so-called "mechanical feed" machine, and the effect of selling records which might be used in connection with such a "mechanical feed" machine (See Defendant-Appellant's Brief on Appeal p. 191-197).

Complainants-Appellees affidavits on the injunction motion showed that such "mechanical feed" machines were not upon the market, and reviewed the question on pages 191-194 of Appellee's Brief, quite fully.

Therefore, while the *construction* of the so-called "mechanical feed" device was not seriously considered by complainants in the motion for preliminary injunction, *the fact that it was not on the market*, or in general use, was proven by complainants' affidavits, and discussed in its brief and doubtless considered by the Court.

As hereinbefore stated, the so-called "mechanical feed" device is believed to be a mere evasion of the patent in suit, and would not affect the question in any way, but the question of whether it is, or is not an attempted evasion, need not be discussed here for the reason that it can play no part in these proceedings, as it is clearly shown that these machines are not upon the market, and not in use.

Mr. Hicks also refers to the alleged mechanical feed machine and the prior art, and states that he advised the Leeds & Catlin Co., Contempt Record, p. 104, as set forth in the affidavit of Mr. E. F. Leeds. Advice of counsel, we submit, however, under the authorities, is no excuse for the violation of an injunction order, as herein elsewhere set forth.

Mr. Hicks also refers to a proposed form of order submitted by complainants' counsel Contempt Record, p. 103, relative to the decree. The fact is, however, that there was

no material difference in the order submitted and the order entered, as will be seen by comparison of the same.

Mr. Hicks also refers to the decision of Judge Hazel, in 145 Fed. Rep. 149 in the suit of these complainants against the American Graphophone Co., restricting the Berliner Duplicate Record Patent, No. 548,623, to hard rubber. This, however, has nothing to do with the sustained claims in this case, as Mr. Berliner had long before invented his record and reproducing apparatus, the subject matter of claims 5 and 35 of the patent, in suit, No. 534,543, which record then consisted of an etched, or photo-engraved disc, or plate, from which the reproductions were made. The subsequent invention for producing these duplicate records in hard rubber or like material, was an improvement, and of later date and therefore, cannot affect the breadth or scope of the claims in suit. The Jones Patent, No. 688,739, referred to by Mr. Hicks, Contempt Record, p. 105, of December 10, 1901, had nothing whatsoever to do with the scope of the claims in this suit.

Mr. Hicks in his affidavit, admits that the Talk-O-Phone Company, the defendant in the other sister suit to this, manufactured the reproducing apparatus, while the Leeds & Catlin Co., were solely engaged in the manufacture and sale of records. It is apparent, therefore, that the Leeds & Catlin Co., since the injunction, continued making and selling records exactly as it did before the injunction, as it had previously never sold but very few machines.

DEFENDANT TRIES ALSO TO EXCUSE ITS CONTEMPT ON THE GROUND THAT COMPLAINANTS DID NOT ATTACH TO THEIR REPRODUCING APPARATUS, INCLUDING THE RECORD, ANY RESTRICTION WHEN THEY SOLD THEM TO PURCHASERS.

Just why the defendant makes this contention is not apparent, as, clearly, a patentee of a patented article, such

as the combination claim 35, in selling the combination and the parts, is not, by law, obliged to place any such notice of restriction upon his goods. Anybody who makes, sells or uses the patented combination without a license is liable to infringement. The defendant's counsel seems to contend that when complainants sell one element of the combination,—the reproducer,—with the other element of the combination,—the traveling tablet having a sound record formed thereon, or record,—without placing a restriction upon the reproducer at the time of the sale, the purchaser has a right to buy from one who is not a licensee as many additional traveling tablets having the sound record formed thereon, (forming a most essential element of the combination), to be used continuously or at intervals, in lieu of the original record, or alternately with the original record, to produce additional selections, whether the original record, or records purchased are broken, or worn out, or if the purchaser becomes tired of that selection.

If defendants' proposition is true, the complainants will have lost the value of the combination, and the decisions of this Court sustaining the combination as patentable and valid will be practically nullified.

As shown by Mr. Middleton's affidavit (Con. Rec. p. 37) and Mr. Haddon's affidavit (Con. Rec. p. 40) the manufacture and sale of these disc records, forming a most essential element of the combination, is the most valuable portion of complainant's business.

NO INTENTION BY COMPLAINANT BY SALE OF REPRODUCER TO LICENSE ANY ONE TO MAKE AND SELL RECORDS FOR USE ON THE REPRODUCER.

Mr. Haddon's affidavit also states (Con. Rec., p. 40):

"The Victor Talking Machine Company, by the

sale of its reproducing apparatus, never licensed, or intended to license, the purchaser, or anyone else, to supply the travelling tablet or record, the other element of the combination of claim 35, for reproducing sound in accordance with the method of claim 5."

As hereinafter more particularly shown (p. 116 of this brief) there can be no implied license to the purchaser of the reproducing portion of the combination to buy or use infringing records, among other reasons, as complainant's reproducer is sold at a separate price, independent of the price of the complainant's records, and complainant's records are sold at a price independent and distinct from the price of the reproducer.

When, therefore, the complaint sells a reproducer at a price distinct from the price of the record, the purchaser is only paying for a portion of the patented combination. The profit for the reproducing element is only a portion of the complainant's profit for the patented combination, and, therefore, by paying the price only of a portion of the combination, the purchaser could not acquire a right to the whole combination, and the whole combination is not, by a sale of a portion of the combination, relieved from the monopoly. Especially is this true in this particular case, where the complainant manufactures and sells, and stands ready to supply the other element of the combination, which is a large part of its business, and so advertises its readiness to the world, at large expense in monthly catalogues. (See Haddon affidavit, Con. Rec. pp. 40-41; Middleton affidavit, Con. Rec., pp. 34-37.)

Defendant also contends that as the disc records are not separately patented, but only patented in the combination with the reproducer, it is entitled to make and sell records for use in the patented combination. This is substantially the illogical contention set out in Defendant's Brief, p. 28, etc.

The defendant also here substantially contends that be-

cause the complainants, or their licensees, have sold these disc records to the public without special restrictions contained thereon, the sale of this record, being one element of the combination, releases the combination from the monopoly of the patent.

In other words, the defendant in effect contends that the sale of a record, one element of the combination, without any restriction being placed thereon, implies the right to the purchaser to make, or have made for him, by one who is not a licensee, the other element of the combination, the reproducer. This was expressly decided in American Graphophone Co. *v.* Amet (74 Fed. Rep. 789), where Judge Grosscup decided that the sale of a graphophone record did not imply a license to the purchaser to make a reproducer.

Defendant's counsel also contends, (p. 29) that disc sound records, having laterally undulating grooves of even depth, belong, to the prior art.

This contention is not supported by the evidence; but even if it were, it would make no difference in this case, as the patented thing is the *new combination*, and the *new method, or process.*

Defendant's counsel seems to base his contention, in this respect, on certain expired Berliner foreign patents, all of which have been considered in the Injunction proceedings in this case, and also on an Edison Patent, No. 1644 of 1878, and Bell & Tainter Patent, No. 341,214, all of which were thoroughly considered and passed upon in the graphophone case, as well as in the Injunction proceedings in this case.

It is decided, not only in Victor Company *v.* American Graphophone Company, but also in American Graphophone Company *v.* Leeds (87 Fed. Rep. 873), in which latter case Judge Shipman regarded the devices described in this Edison Patent as mere suggestions, and having no anticipatory effect.

RE SO CALLED "MECHANICAL FEED" DEVICES.

The Defendant's Brief (p. 31, etc.) endeavors to make it appear that so-called "mechanical feed" devices, for reproducing sound from flat disc records, have been known for a number of years past.

As shown by the proofs, the only mechanical feed reproducing machines in commercial use at the time of the suit, and at the time of the Contempt proceedings, are the mandrel type of machine, of the phonograph and graphophone, for reproducing from cylindrical records.

The fact that Mr. Berliner, in his patent, No. 564,586, may have stated that that flat disc record recorded on the recording machine shown in Figure 1 of that patent could be reproduced upon it, in no manner affects the situation in this case.

The only question here involved, in this connection, would be whether, at the time of the Contempt proceedings, mechanical feed machines were upon the market, and in common general use, upon which defendant's Contempt Records could be used, for reproducing, and that in the sales of the said Contempt Records the intent was that they should be so used on said so-called "mechanical feed" machines, and that they were sold for this purpose. There is, however, absolutely no evidence in this case that any such mechanical feed machines were in use and on the market, or, in fact, ever had been. Complainants' affidavits show conclusively that there were not. There is no evidence of any records sold by the defendant to owners of such machines.

Attention is called to the defendant's affidavits, especially that of Edward F. Leeds (Con. Rec., p. 52, etc.) and quoted in Defendant's Brief (pp. 32, 33), where it will be noted that while Mr. Leeds tries to create the impression that such so-called "mechanical feed" machines were sold, and in general use, he nowhere states that the one hundred machines which the Leeds & Catlin Company are said to have purchased from the Talk-O-Phone Company, in Oc-

tober, 1906, or any other such machines were ever sold by the defendant. They evidently remained in the possession of the defendant, and *there is no evidence of any sale of any such machines,* or their use, other than the statement of Mr. Leeds, to the effect that the defendant took over from the Talk-O-Phone Company (which was enjoined in the sister suit in this case), one hundred so-called mechanical feed device machines.

The affidavits of Mr. Middleton (Con. Rec., p. 35), and Mr. Haddon (Con. Rec., p. 39, etc.), show that the complainant's apparatus is the only one upon the market for reproducing sound from a record similar to the contempt records.

We submit that defendants contention relative to the so-called mechanical feed machine is illogical and unfounded, and is merely devised for the purpose of trying to evade the decree, among others, for the following reasons:

(1) That this question was raised in this Court upon the argument of the motion for preliminary injunction before Judge Townsend, and the injunction granted nevertheless.

(2) That this question was raised on the appeal to the U. S. Circuit Court of Appeals specially in Defendant-Appellant's Brief, under Points Fourteen and Fifteen (pp. 191 to 198) and not deemed worthy of consideration by the Court, and the decree of the Court below affirmed.

(3) That the so-called "mechanical feed" device of the defendant at best is a mere subterfuge, is a mere attempt to evade claims 5 and 35; that it does not evade them; that the merits claimed for it are spurious; that the device would work better without the so-called "mechanical feed" than with it, and that it infringes the claims.

(4) That the Contempt Records are exactly the same

records in construction and operation as the infringing records sold by the defendant before the injunction, and that the question of whether such a record, if used on such so-called "mechanical feed" machine, would infringe the combination of claim 35, or the method of claim 5, is a question which is irrelevant to this contempt proceeding, as it was before the Court in the injunction proceedings.

(5) That the so-called "mechanical feed" machines are not commercially upon the market, as shown by the petitioners' affidavits, and even if a few such machines had been sold by the defendant since the injunction, or had been placed on sale at a few stores since the injunction (which we deny) this fact would not relieve the defendant from the effect of the injunction, restraining it from selling the apparatus and devices of claims 5 and 35 of the patent, such as the traveling tablet or record, for use in combination with the reproducing apparatus. The defendant in the injunction proceedings produced no evidence to show that the so-called "mechanical feed" machine was on the market—prior to the injunction—E. F. Leeds' affidavit (Injunction Record, they were not. The general sale by the defendant of its records after the injunction would, of course, be contempt.

(6) That the petitioners' proofs show that the defendant, since the injunction, sold records to Thomas W. Luck, Charles M. Hemenover and Charles K. Bennett (Bennett affidavit No. 2), without making any inquiry as to how, or in connection with what reproducing apparatus, the said records were to be used, and sold the same with the knowledge that the only reproducing apparatus in general use, amounting to hundreds of thousands of machines, was that constructed and operated in accordance with the claims of the patent in suit, and which could only be legitimately operated when in combination with complainants' records, forming the other element of the combination, and then

only when the reproducing apparatus was manufactured by the complainants or its licensees. To assume that the defendants were excused from inquiry, or presume that they were to be otherwise used because the defendant may have had a few so-called "mechanical feed" machines upon the market, sold since the injunction, is puerile and unworthy of consideration.

(7) The affidavits of Albert Platz, George M. Thompson and Bennett affidavit No. 1 show that the defendant, since the injunction, sold, in the ordinary course of business, infringing records to these parties, with the knowledge, specially brought to the defendant's attention, that the purchasers had Victor reproducing apparatus, of the Victor Talking Machine Company, and in the case of the purchases of Thompson and Bennett (Bennett affidavit No.), the defendant's representative told the purchasers that the defendant's records sold could be used on a Victor reproducing apparatus or machine. In the case of Albert Platz, they were sold to him with the knowledge that he was a dealer exclusively in Victor talking machines, and dealt in no other machines.

This Very Question was Fully Before the Court Below and the Appeal Court Upon the Injunction Proceedings.

The argument was presented in the Court below, and in the Court of Appeals by the defendant, that the Leeds & Catlin records could be used on the so-called "mechanical feed" machine, and therefore did not infringe. The device and the machine were illustrated in a cut accompanying Mr. Irish's affidavit (Injunction Record, p. 291), and described among other places in Irish's affidavit (p. 280, fols. 857-8—Hick's Aff. p. 96-97; Ensign Aff. 111-112, fols. 333-336, p. 114—fol. 342. Leeds' Aff. p. 293, fol. 878, p. 295, fol. 883.) The so-called "mechanical feed" machine is also illustrated and the alleged merits described in the Appeal Rec-

ord in the suit of the Talk-O-Phone Co., pp. 319,320, 322, and 324.

We would call the Court's attention particularly to the argument of defendant's counsel in the injunction proceedings under Point Fourteen, Appeal Brief, p. 191, etc., where he states, *inter alia*, referring to the records (p. 191):

> "Such records are capable of use with machines of various constructions. The proposition that the making and selling of such sound records can be an infringement of the patent in suit is untenable."

Defendant's counsel also states (Injunction Brief, p. 191):

> "The threatening circular letter of complainant company (p. 211, fols. 632-633) and of complainant's counsel (pp. 212-213) indicate that it is complainants' contention, and that it is complainants' purpose to state to the trade, that all disc sound records are infringements of claims 5 and 35 of the patent in suit. In view of the great injury which has been caused to defendants by reason of complainants' threatening letters to the trade, and because the contention is entirely without foundation, it becomes important, especially for the Leeds & Catlin Company, that this point be passed upon by the Court, should the Court for any reason hold that the patent has not expired, and that claims 5 and 35 are entitled to a construction broad enough to cover defendant's machines."

Defendant's counsel also states (Brief, p. 194)

> "Under the following point, it will be shown that the talk-o-phones operating with the aid of mechanical feed devices cannot possibly be construed as infringements of claims 5 and 35 of the patent in suit and that such talk-o-phones are likewise adapted for use with disc sound records having lateral undulations."

Defendant's counsel also states in this connection (Injunction Bf., p. 194):

"In the affidavit of Leeds (pp. 293-296), it is fully shown that the contention of the moving affidavits that disc sound records having lateral undulations can be used only on machines made according to claims 5 and 35 of the patent in suit is untrue and that the contention of the moving affidavits that machines made according to claims 5 and 35 can be used only with disc sound records having lateral undulations is likewise untrue. Mr. Leeds points out the different kinds of records and talking machines that have been made and put upon the market and are upon the market today and shows that disc sound records having lateral undulations existed long prior to the date of the invention of the patent in suit, and that Berliner himself secured patents covering disc sound records and machines for reproducing sound from the same, and that all of Berliner's said patents have expired. To the same effect in the affidavit of Mr. Irish (pp. 285-288, fols. 853-862), and the affidavit of Mr. Ensign (p. 114).

The affidavit of Mr. Leeds, referred to in defendant's above quoted argument (Injunction Record, p. 293 to 296), states on page 293:

"The Talk-o-Phones Exhibits A and B are such machines, which are constructed according to the feed mehanism of the early prior patents and not according to the alleged invention of claims 5 and 35 of the patent in suit."

These so-called mechanical feed machines, marked "Exhibits A and B" were those produced by the defendant on the motion for preliminary injunction. In Mr. Leeds' attempt to show that such machines were in commercial use, he states, on p. 295 of the Injunction Record:

"On November 2, 1905, at the Imperial Hotel in New York City, I saw the Talk-o-Phone such as Exhibit A, with a mechanical feed device in successful and perfect operation with records of different makes and I know that such machines have been extensively advertised for sale by the Talk-o-Phone Company."

It will be noted, however, that there is no evidence of a sale.

The defendant's counsel, on page 196 of his Appeal Brief, injunction proceedings, refers to the construction of this so-called "mechanical feed" machine, and states:

> "The construction and operation of the Talk-O-Phones with mechanical feed devices are described in defendant's affidavits (aff. Hicks, pp. 96-97; aff. Ensign, pp. 111-112, fols. 333-336, p. 114, fol. 342; aff. Irish, p. 286, fols. 857-858; aff. Leeds, p. 293, fol. 878, p. 295, fol. 883). A copy of the description and claims upon an application for a patent therefor on behalf of the Talk-O-Phone Company is one of defendandt's Exhibits (p. 275). And the machines, Exhibits A and B, show the Talk-O-Phones with the mechanical feed devices, which, as Mr. Irish states in his affidavit, have been advertised by the Talk-O-Phone Company at an expense of from $22,000 to $23,000."

As pointed out in Complainants-Appellees' Appeal Brief in the appeal to the Court of Appeals in the injunction proceedings (p. 191), this so-called mechanical feed machine has only been advertised since the first decision of this Court, sustaining claims 5 and 35 in the case against the American Graphophone Company, and the application for the patent for this so-called "mechanical feed" machine, referred to in Mr. Hick's affidavit for the defendant in the preliminary injunction proceedings (Injunction Record, p. 96, fol. 287) evidently was filed since that date, as Mr. Hicks there states that the first action of the Patent Office on the said application as dated March 8, 1906.

In considering the question of this so-called "mechanical feed" machine in the injunction proceedings, Complainants-Appellees' counsel states (Appeal Brief, p. 192):

> "Manifestly, this alleged "mechanical feed" device, however, is nothing but an attempt at evasion of claims 5 and 35 of complainants' patent in suit, and

the mechanical feed has no useful function to perform. The device will operate better without it than with it.

"The mere fact that the defendants have evidently gone to so much trouble and expense in devising the so-called 'mechanical feed' machine, is strong evidence of their weakness in the defence of the machines in the present motions. If they had substantial belief in the defences which they now present upon these motions, they would have no need of resorting to such means as devising a way out through the assistance of the so-called 'mechanical feed' machine.

"It is obvious that the object of the getting up of this machine by the Talk-O-Phone Company, outside of any stock selling scheme, was to get away itself from the infringements of claims 5 and 35 of the patent in suit, which it manifestly believed were valid, and also to furnish an excuse to record manufacturers, such as Leeds & Catlin Company, for making disc records, so that the Leeds & Catlin Company could argue that their records were intended for use on the so-called 'mechanical feed' machine, and, therefore, did not infringe the patent either by contributory infringement, or otherwise.

"This plan of the Talk-O-Phone Company, which was not materialized, as none of these 'mechanical feed' machines have been placed upon the market, is an obvious one, and, we submit, should be signally discountenanced by this Court.

"The fact is, as shown by complainants' proofs before referred to that outside of the complainants' machine, there is no talking machine upon the market with which such records as manufactured by the Leeds & Catlin Company could be used, except the infringing machines."

This Court, therefore, as well as the Circuit Court, had before it this question of the alleged mechanical feed device, in the injunction proceedings, and it has no place now in contempt proceedings. (See also p. 111 of this Brief.)

RE DEFENDANT'S CONTENTION THAT IT HAS A RIGHT TO MANUFACTURE AND SELL DISC RECORDS FOR EXPORT TO FOREIGN COUNTRIES.

It is not seen how the decision on this point, one way or the other, affects the action of the defendant in selling records at its store just as it had done before the issuance of the injunction, without inquiry as to how they were to be used, and with full knowledge that thousands of infringing reproducing apparatus had been sold, and were in use, which infringing reproducing device the defendant itself had sold, and also with full knowledge that these records were to be used and could only be used in the combination of the claims of the patent in suit.

The statement by defendant's counsel that there is no evidence to show that the defendant has assisted in any infringement, is unfounded for there can be no clearer evidence of infringement than, as above pointed out, that the defendant continued, without any change whatever, in the sale of the records, *the same as it sold before the injunction*, and which it was enjoined from making, using or selling. The sale of these records at defendant's store, without any inquiry as to whether they were to be used on any one of the thousands of infringing machines that have been sold, some of which the defendant itself sold, *and also with full knowledge in other instances that they were to be used on machines of complainant's manufacture*, is we submit conclusive evidence that these records so sold since the injunction were to assist in an infringement, and in violation of the injunction.

RE DEFENDANT'S POINT ONE.

Defendant contends that the sound record is a perishable temporary element of the combination, and that, under the case of Morgan Envelope Co. v. Albany Paper Co.,

referred to, the purchaser of complainant's combination of claim 35 has the right to replace the record, and any manufacturer has the right to make and sell to said purchasers such records for the purpose.

This point is manifestly the main point of defendant's variously stated defences, and is contained on page 42 of the Defendant's Brief.

The defendant's counsel appears to hinge his whole case pretty much upon the decision in the case of Morgan Envelope Co. *v.* Albany Paper Co., decided by Judge Wallace in 40 Fed. Rep., 577, and by the U. S. Supreme Court in 152 U. S. 425.

Judge Lacombe, finding the defendant in contempt (Con. Rec., p. 111), decided that the disc records of the present case were "wholly unlike the toilet paper in Morgan Envelope case (which was destroyed by single use)", and the substitution of the new record could not be "in any legitimate sense **'repair'.** (See Davis Electrical Works *v.* El. Light Co., 60 Fed. Rep., 276)."

The position of the complainants in the present suit is not that they dispute, in any way, the law, as laid down in the Morgan Envelope Co. case, as applicable to the facts in that case, but that they contend, most strenuously, that the facts of the present case are absolutely different from those in the Morgan Envelope Co. case, and that the decision in the Morgan Envelope Co. case was never intended to be so sweeping and far reaching as to include the practically indestructible record disc of the combination of claim 35.

As hereinbefore shown, the defendant has founded his defences upon a false premise, viz.—that the complainant's record is a perishable, temporary element, which the facts do not, and cannot, warrant.

Further, that if the complainant's record would, in time, wear, it is manifestly not a perishable temporary part such as contemplated in Morgan Envelope Co. case, where

the toilet paper was intended, and expected *to be consumed and destroyed by a single use.*

Therefore, the consideration of this Point One of the defendant is rather one of fact than law.

As before stated, the complainants' position is that the decisions in this Morgan Envelope Co. case were never intended to, and cannot apply, to such elements as the practical indestructible disc records of claim 35.

The permanency and durability of these disc records, has hereinbefore been fully considered, and need not here again be reviewed.

The defendants' brief (p. 43, etc.), endeavors, by repetition, to emphasize the alleged temporary character of *complainant's* sound records, which fact, however, as hereinbefore pointed out, has not been proven by defendant's affidavits, Edward F. Leeds (Con. Rec., p. 50) being the only one who makes any specific averment of this character, while, on the other hand, as hereinbefore pointed out, complainants' affidavits of Mr. Middleton and Mr. Kennedy, in the Injunction proceedings, and of Mr. Middleton, in the Contempt proceedings, in addition to the other evidence hereinbefore referred to, show these records to be made of indestructible material, and capable of almost indefinite wear before any appreciable deterioration in tone to the average ear.

We will, therefore, consider somewhat briefly, these decisions in Morgan Envelope Co. *v.* Albany Paper Co.

RE MORGAN ENVELOPE CO. v. ALBANY PAPER CO. (40 FED. REP., 577 AND 152 U. S. 425).

In the reproducing apparatus of claim 35 the reproducing stylus, mounted so as to be free to be vibrated and propelled by the record, is a very delicate acoustical device for

reproducing sound in combination with the traveling tablet having a sound record formed thereon, in the method set forth in claim 5.

The traveling tablet has the sound record formed thereon in a continuous spiral groove of even depth, with the sound undulations in the side walls of the groove, and, as heretofore shown, is formed in hard, durable material. This traveling tablet is a very important piece of the mechanism of the claim, which as the tablet revolves vibrates the reproducing stylus back and forth mechanically in a double cam-like action, at the same time mechanically propelling the reproducing stylus, by reason of the spiral of the record groove, from the periphery towards the centre in a substantially radial line. We see therefore that we have in this traveling tablet having the sound record formed thereon, a most important mechanical element of the combination, constructed to co-act mechanically with the reproducing stylus, the other element of the combination.

In this respect also it will be seen how very materially different this record element of the combination is from the toilet paper in the Morgan Envelope Company case, which was a *product* or material contained in a mechanically operated casing, *to be fed out* by the mechanically operated casing *to be used up and consumed*. The toilet paper in the Morgan Envelope Company case, as held by Judge Wallace (40 Fed. Rep., 580), "*is one for temporary use only*," which "*may be completely used up in a few days.*"

The toilet paper was akin to the wheat in the bins connected with a patent milling machine, or the pulp in the vats connected with a patent paper-making machine, or the small blocks of chocolate in a patent nickel-in-the-slot vending machine, and such like cases where the material is designed *to be fed out to be used up*.

It is respectfully submitted that a careful reading of Judge Wallace's decision in the Circuit Court in this Morgan Envelope Company case will fail to disclose any statement of

the law which would warrant such a construction as defendant's counsel has sought to place upon this decision of Judge Wallace, so as to make it apply to the disc sound records forming part of the combination of the claims in this suit.

Judge Wallace's decision was affirmed by the Supreme Court of the United States on appeal (152 U. S., 501), and we submit that a careful examination of the opinion delivered by Mr. Justice Brown fails to support any such construction or contention which defendant's counsel seeks to place upon it in this case. The Supreme Court stated, *inter alia:*

"The first defence raises the question whether when a machine is designed to manufacture, distribute or serve out to users a certain article, the article so dealt with can be said to be a part of the combination of which the machine itself is another part."

The attitude of the mind of the Court regarding this Morgan Envelope Company case is well illustrated in this connection by the reference which it makes to the log which is sawn in the saw mill; to the wheat which is ground in the rollers; to the pin which is produced by the patented machine; to the paper which is folded and delivered by the printing press.

The fact that the roll of paper in the claim in controversy in the Morgan Envelope Company case, while included as an element of the combination, was a thing to be consumed which the machine fed out, was manifestly the underlying thought of the Court in very properly holding as it did, though the Court did not deem it necessary to decide positively this point, as the facts failed to sustain the charge of infringement. It also appears from the decision of the Supreme Court in that case, "that it had not been the practice of the plaintiff to sell its fixtures independently of its paper, and that they sold only to such parties as dealt in and used their paper."

The Supreme Court, as well as the Court below, based

the decision manifestly upon the theory that the paper was merely the material to be used up, that the fixture which distributed the paper was the real mechanical patentable combination, that the fixture which contained the paper having the knife and cutter therein with mechanism for severing the unwound portion, was the real substantial thing patented, and that the paper which was for consumable use was akin to the log to be sawn, or the wheat to be ground, or the paper to be folded and delivered in the printing press, etc., and that therefore, the fixture being the mechanical patentable feature or main part of the device, others had a right to supply the consumable paper for delivrey from the fixture, in essentially the same way as the farmer would have the right to sell wheat to be ground in the patented mill, or logs to be sawn in the patented saw mill, or the manufacturer of book paper would have the right to sell the paper to be folded and delivered in the patented printing press. And this is conceding, as suggested by the Court, that the consumable paper formed a valid combination with the mechanical fixture.

This distinction, made by both the Circuit Court and the Supreme Court, regarding the consumable character of the toilet paper was, of course, the distinction which caused the Court to decide as it did. This is evidenced, among other things, by the statement of the Supreme Court in considering the question of whether the sale of this consumable material—toilet paper—by an outside manufacturer to the user of the fixture, was an infringement, where it states:

> "We are of the opinion that it is not. There are doubtless many cases to the effect that the manufacture and sale of a single element of the combination, with intent that it shall be united to the other elements and so complete the combination, is an infringement. Saxe *v.* Hammond, Holmes 456; Wallace *v.* Holmes, 9 Blatch. 65; Barnes *v.* Straus, 9 Blatch. 553; Schneider *v.* Poultney, 21 Fed. Rep. 399——"

The Court then goes on to state:

> "But we think these cases have no application to one where the element made by the alleged infringement is an article of manufacture, perishable in its nature, which it is the object of the mechanism to deliver, and which must be renewed periodically whenever the device is put to use."

The complainant's disc record forming part of the combination of claim 35 in the case at bar, manifestly comes under the above decisions cited in the opinion of the Supreme Court in the Morgan Envelope Company case. The complainant's record is not ~~only~~ perishable in its nature in the sense in which the word "perishable" is used in the opinion, but further it is a most essential mechanical element of the combination of claim 35, as hereinbefore pointed out. Claim 35 has only two elements—the first is this traveling tablet having the sound record formed thereon with laterally undulating grooves, and, second, the reproducing stylus shaped for engagement with the record, and mounted so as to be free to be vibrated and propelled, the laterally undulating record grooves in the traveling tablet operating to mechanically vibrate the end of the reproducing stylus back and forth in a double cam-like action, at the same time propelling the stylus point in a radial path from the periphery of the traveling tablet towards the centre.

It is almost impossible to understand how any one can logically argue that such a mechanism as complainant's traveling tablet having the sound record formed thereon, made in practically indestructible material, can be likened to the sheets of toilet paper of the Morgan Envelope Company case, which are intended for consumption and use.

The Court likens again this paper for consumption and use to the log of the saw mill, if it were an element of the combination, and states:

> "This exhibits not only the impossibility of this construction of the patent, but the difficulty of treating the paper as an element of the combination at all."

From this last quotation it is manifest that the Supreme Court regarded the consumable paper as an improper element of a patentable combination.

The Supreme Court here further states:

> "In this view the distinction between repair and reconstruction becomes of no more value, *since the renewal of the paper is in a proper sense neither the one nor the other.*"

The Court then reviews the case of the Cotton Tie Co. *v.* Simmons, 106 U. S., 89, which is not a parallel case.

The Court further in referring to the toilet paper likens it to any product to be placed for delivery in a patented mechanism, and says:

> "The replacement is of a product which it is the object of the mechanism to deliver."

The Court also refers to Wilson *v.* Simpson, 50 U. S., 109, where the thing to be replaced was the cutting knives of the planing machine, which, of course, from the character of the use, were constantly wearing out in the extremely hard usage which rotary knives are subjected to in being run at a tremendous velocity in planing boards of all kinds. This is based on the doctrine of repair of a minor part.

The major part of defendant's brief is interwoven with a consideration of this case of Morgan Envelope Co. *v.* The Albany Paper Co., and in an attempt to show that complainant's hard, durable records are to be likened unto the paper designed for consumption and destruction in the Morgan Company case.

It would seem unnecessary to present any further argument upon this point.

Certain statements are made, however, in defendant's brief, which may be misleading, such as the statement in defendant's brief, p. 43, that complainant's records "may be

worn out or broken, or otherwise rendered unsatisfactory or useless within even the short space of an hour or a day. The record cannot be used in the sound reproducing apparatus for the reproduction of sound therefrom for any considerable number of times without the constant destruction of the record."

There is no reliable warrant in the proofs for this statement, unless it is the understanding that, of course, sound records, like many other patented things, may be destroyed and broken quite readily by improper use.

COMPLAINANT'S INTENTION RELATIVE TO THE RECORDS.

It is manifest from complainant's proofs that the complainant's intention in selling the reproducer and records forming the two elements of the combination of claim 35, to be used in accordance with claim 5, was that the records should be durable and lasting. As shown by defendant's affidavits, some of complainant's records sold for as much as $5 apiece. These are records containing high-priced talent, the complainant frequently paying the talent for one selection as much as $1,000.

It is an unthinkable thing that complainant should attempt to sell, or that any purchaser would buy at the price of $5, a disc record which is as perishable as defendant contends that it is, and could only last a few reproductions.

Mr. Middleton's affidavit (Contempt Record, p. 37) shows that the purchaser frequently expends very much less for the machine than he does for his collection of records, and states that

> "Records are being constantly purchased by the purchaser of a machine from time to time."

As stated by Judge Lacombe in his decision, the substitution of new records are **"more frequently in order to increase the repertory of tunes than as substitutes for worn out discs."**

The complainant's intention as to the durability of the records and that they shall last, is also evidenced by complainant's affidavits on motion for preliminary injunction, particularly of Mr. Middleton and Mr. Kennedy, showing they are made, as hereinbefore set forth, of indestructible material (see Middleton affidavit, Injunction Record, p. 51; and Kennedy affidavit, Injunction Record, p. 60, where he states that these records are "*made of hard, indestructible material*").

This intention is also evidenced by Mr. Middleton's affidavit (Contempt Record, pp. 45 and 46), where he says that the material of complainant's record **"is of the best and most durable character known to us for the purpose."**

Complainant's intention that no implied license by the sale of the reproducer, one element of the combination, was granted to the purchaser to purchase or use or make the hard, indestructible record, the other element of the combination, is shown, among other places, by Mr. Haddon's affidavit (Contempt Record, p. 40), where he states:

> "The Victor Talking Machine Company by the sale of its reproducing apparatus never licensed or intended to license the purchaser or anyone else to supply the traveling tablet or record, the other element of the combination of claim 35 for reproducing sound in accordance with the method of claim 5."

Mr. Haddon also shows at the same portion of his affidavit the intention of the Victor Company was positively to supply the disc records—the other element of the combination—to be used in conjunction with the complainant's reproducer. He states:

> "A large portion of the Victor Company's business

has been and is in the manufacture and sale of disc records for use in connection with the reproducing apparatus which it makes and sells, and a large portion of its profit is derived therefrom. When it sells reproducing apapratus to a purchaser which is part of the combination of claim 35, which is to be used in combination with the other element of the claim sold by complainant, the traveling tablet or record which it also sells to the purchaser at a separate price, distinct from the price of the reproducing element, the profit from the reproducing element is only a portion of complamant s profit, the other portion of which is derived from the sale of the traveling tablet or record. The complainant could no tafford to sell the reproducing apparatus at the price which it does if it were not for the fact that the balance of the profit is to be derived from the records manufactured and sold by the complainant."

If defendant's contention be true that an implied license is acquired by the sale of the reproducer to make and sell records, the converse would also be as logical that for complainant to sell records would imply a license to make a reproducer.

This above proposition should negative defendant's contention, as defendant's contention would thus nullify the decision of this Honorable Court of Appeals in the Graphophone case, and in the injunction proceeding in this case, and in the Talk-o-phone case.

Defendant is manifestly attempting to seek an implied adjudication from this Court of the correlative theory that somebody else can make the other element of the combination, the reproducer apparatus, on the same theory that they are entitled to make and sell the sound records, and thus deprive the complainant of the benefit of the adjudication of the Circuit Court of Appeals in the Graphophone, Talk-o-phone and Leeds & Catlin cases.

As hereinbefore shown, the complainant's sound records have no analogy to the cutter knives of the planing mill in

Wilson *v.* Simpson, before cited, though defendant strenuously contends that they are the same.

In the combination of claim 35 it is not intended by the complainant that the records should be thrown away and put into disuse at short intervals, like the cutter knives. The cutter knives of Wilson *v.* Simpson are more like the little removable needle points in complainant's reproducer, in that the little needle points wear out quite rapidly, and, as shown by the affidavit, are frequently replaced. The cutter knives of the rotary planing machine need constant sharpening from the rough usage given them, and consequently are constantly wearing down. They are more like the typewritten ribbon spools in the case of Wagner Typewriter Co. *v.* Webster Co., 144 Fed. Rep. 405, where the Court held that while the spools were part of the combination, they were merely an *ordinary working part.* This case quite concisely sets forth the distinction, and holds that while an ordinary working part may be substituted, on the doctrine of repair, a chief part of the combination, or a vital element thereof, cannot.

USERS OF COMPLAINANT'S REPRODUCER AS A RULE BUY NEW RECORDS TO INCREASE THEIR REPERTORY.

Purchasers of complainant's reproducer do not buy new records because those formerly purchased from the complainant are worn out and inoperative, but buy them to be added to their previous collection to increase their repertory, as decided by Judge Lacombe. In this manner again the case at bar is to be distinguished from the repairing or replacing of the cutting knives in the planing machine of Wilson *v.* Simpson. In Wilson *v.* Simpson it was held that the purchaser of the planing machine in buying new knives "repairs the damage which may be done to it——"

The doctrine laid down in Wilson *v.* Simpson was actually based upon that of repair, which is an equitable one.

As before stated, the purchaser of complainant's machine could undoubtedly repair the motor used for rotating the traveling table, and also insert or renew the little needles as they became worn out, the device being arranged so that the needles are removable.

RE DAVIS ELECTRIC WORKS v. EDISON ELECTRIC LIGHT CO., 60 FED. REP., 276 (U. S. C. C. A., FIRST CIRCUIT).

Judge Lacombe very properly referred to this case as one of the decisions in support of his finding; the defendant, however (brief, p. 46), criticizes this case, basing his criticism on his statement that "the Carbon Filament is exactly like the Cotton Tie case, and rests upon the same principle, and has no analogy whatever to this case or to the case of the cutter knives or to the case of the toilet paper."

In the Davis Electrical Works case above referred to, it was held that the defendant infringed the Edison Incandescent Electric Lamp patent because he substituted in an old lamp the vital element of the combination, viz., the filiment. The defendant bought old lamps, made a hole in the bulb, put in a new filiment, exhausted the air and closed the hole.

The claim is as follows:

> "(2) The combination of carbon filiments with a receiver made entirely of glass, and conductors passing through the glass, and from which receiver the air is exhausted, for the purpose set forth."

Defendant's counsel criticizes this reference because he holds that there were no temporary parts to be replaced "in accordance with the intention of the vendor." There were no temporary parts in claim 35 to be replaced within the in-

tention of the vendor. Manifestly the carbon filiment in the glass bulbs was of a more temporary and destructible nature than the complainant's sound record of the combination of claim 35, and was very much more perishable. The fact that complainant's sound record is removable from its connection with the reproducing stylus is not because the record wears out quickly at all, but because from the very nature of the invention **a repertory is required.**

It might as reasonably be argued that the purchaser of a *patented music box* of which the spiked *removable barrel* formed a part of the combination, in selling the music box with two or three extra barrels implied a license to the purchaser to make or use additional barrels.

In this case of Davis Electric Works v. Edison Elec. Light Co., the Court said, *inter alia:*

> "In no case has the Supreme Court held that this right (the right of repair) is absolute and universal, or that it may not be limited by express or implied restrictions, either entering into the transaction of the sale of the patented machine or device."

The Court of Appeals also said in this case:

> "The proposition of the appellants that if the injunction stands it gives the complainants below the same benefit as though the patent contained a claim for a filiment alone, serves properly to caution us, but cannot operate as a definitive limitation on our conclusions. * * * So ordinarily if the new element in the combination is associated in the claim with additional elements which in the state of the art there is no practical method of replacing by others, the patentee obtains the same practical advantages as though this new element had been claimed alone—at least until the art makes new discoveries. Neither in such instances nor in the case at bar is the course of the law to be turned aside because the practical result may be to give a patentee for the time being more than the Patent

Office contemplated, nor is the patentee to be deprived of his just rights because under the same circumstances he gets individual advantages beyond what he expressly bargained for."

The Court also stated:

"We do not in terms give the patentee the benefit of a claim for the filiment alone, nor prohibit its use in some other combination than that set out in the second claim, if some ingenious way of making such other combination is ever discovered."

The Court further stated:

"The appellants do not bring themselves within the construction in Wilson *v.* Simpson, 9 How. 125, renewed in substance in Cotton Tie *v.* Simmons, 106 U. S. 94, and p. 52 1 Sup. Ct., to the effect that temporary parts may be replaced 'in accordance with the intention of the vendor.' While the Supreme Court has not expressly given this as a limitation, it may be made effectual as a permit where the facts authorize it."

The Court further stated:

"The suggestion that the worn-out filiment in the Edison device stands for the old burned-out wick in an ordinary lamp is not sustainable. So far from the filiment being the mere wick, it is itself essentially the lamp; that is, the electrical lamp of Edison."

The consumable, burned wick of a patented oil lamp, of which the wick might be a combination, would be a parallel case with the toilet paper in Morgan Envelope Co. *v.* Albany Paper Co.

The Court in this case of Davis Electrical Works v. Edison Co., notwithstanding the fragile character of the filiment, held that to replace it was an infringement of the patent.

FURTHER CONSIDERATION OF THE MORGAN ENVELOPE COMPANY CASE IN THE SUPREME COURT AND JUDGE WALLACE'S OPINION THEREIN (40 Fed. Rep. 577.)

Defendant's counsel (defendant's brief, p. 50), treats of the opinion of his Honor Judge Wallace in this case in the Circuit Court, and the endeavor of defendant's counsel is to show that the opinion in this Morgan Envelope Company case in the Court below was intended to include such parts of the combination as complainant's sound record in this case, which, as has been heretofore shown, was a most important mechanical element of claim 35, coacting and cooperating with the reproducing stylus, the other element. Defendant's counsel tries to liken it to the consumable roll of paper and to fit Judge Wallace's opinion upon the case at bar.

As I have hereinbefore considered this question of what appears to the complainant to be a radically different question from that involved in the Morgan Envelope Company case, it will be unnecessary to enlarge again upon this subject. Suffice it to say that it is apparent from a careful reading of Judge Wallace's opinion that the underlying fact upon which that decision was based was, as stated in the opinion, that "The paper as an element of the patented invention is *one for temporary use only*. The fixture proper is a durable device which is designed to last for many years; while *the roll of paper may be completely used up in a few days.*"

It is not assumed that Judge Wallace intended to make any such broad statement of the law as contended for by defendant's counsel, that the purchase of a patented device so releases it from the monoply that the purchaser may manufacture, without further license, vital elements of the combination, such as the hard disc records in this case, and manufacture *ad libitum* any number of them for use in connection with the other element of the machine.

Judge Wallace states:

> "The purchaser who buys a machine or device, patented or unpatented, without any restriction as to the mode or extent of the use to which he may apply it, acquires all the rights of the seller, and may do with it whatever the seller might have done if he had not parted with it."

What Judge Wallace meant by this is apparent from the next sentence, wherein he states:

> "He acquires the right to use it, or repair it, and to sell it to others; and those to whom he sells acquire all his rights."

The Court also held that if the purchaser may lawfully repair, it is immaterial if he procures another to do it for him, if the act when done does not violate the rights of the owner of the patent.

It is understand by complainants that Judge Wallace in rendering this decision did not mean to be interpreted as going any further than the well settled doctrine of repairs warrants. It may be fairly inferred from Judge Wallace's opinion that it was not intended by the Circuit Court to go any further than the doctrine laid down in Wilson *v.* Rosseau, 4 Howard, 647, or in Wilson *v.* Simpson, 9 Howard, 109, cited by the Court.

That Judge Wallace was confining his decision within the limits of the doctrine of repair is also evident from the statement on page 581 of the decision, viz.:

> "If it (the right to repair a patented article) did not exist, the value of most patented articles would be materially lessened, and thus the owner of the patent as well as the public would fail to derive the full benefit of the invention. There is nothing inconsistent with these views in the case of Cotton Tie Company *v.* Simmons, 106 U. S. 89——"

Of course, the doctrine of contributory infringement has no application to a case where the alleged infringer does

no wrong, or does not concert with another to do wrong. Hence there was no contributory infringement in the Morgan Envelope Company case.

If, however, it is found that the party charged with contributing to the infringement has done a wrong in this respect, he, of course, is liable for contributory infringement, as in the suit at bar.

The basic principles upon which Judge Wallace's decision was founded in this case were the same as those upon which the Supreme Court affirmed the decision, viz., that the paper was *intended for consumption in use*, and as an element of the combination it was merely one for temporary use only, and was merely placed in the holder or other portion of the combination *as a product or material to be fed out to be used up*, and from the very nature and construction of the thing this was the intention of the owner of the patent.

Therefore the question involved in the Morgan Envelope Company case, instead of being the precise question here involved, as stated by defendant's counsel on page 50 of the brief, is a radically different proposition, and should have no bearing upon the question involved in this case.

DEFENDANT ALSO AN INFRINGER IN SELLING RECORDS WHERE THEY ARE USED OR INTENDED TO BE USED ON INFRINGING REPRODUCING APPARATUS.

Defendant admits (brief, p. 53) that:

> "The sale of a record by defendant for use upon an infringing machine, that is to say, for use upon a machine not sold by complainants or their licensees, would clearly constitute contributory infringement."

Defendant's counsel contends that there is no proof that the defendant after the injunction sold sound records for use upon an infringing machine. It is shown, however, by

complainant's proofs (Middleton affidavit, Contempt Record, p. 36), that there were in use at the time of the Contempt sales thoroughout the United States many hundreds of reproducers which had been made and sold in violation of the claims of the patent in suit, among others notably the Talk-o-phone machines enjoined by this Court, which were in use in the homes of individuals, hotels, restaurants, places of amusement, and so forth. Mr. Middleton also shows that the owners of these machines are constantly purchasing disc talking machine records for use in combination with this reproducing apparatus, from dealers selling infringing records, such as the disc records which the defendant company has sold and is now continuing to sell, thus depriving the complainant of a very considerable portion of the renevue from these records which form an essential and important element of the combination.

Mr. Middleton also shows that the purchasers of the infringing machines, such as the Talk-o-phone, who at the time of purchase purchased the Leeds & Catlin records with it, are very apt to continue purchasing the make of record which they originally purchased with the infringing machine if the defendant company is allowed to continue the manufacture and sale of the Contempt Records.

Re Intent to Infringe.

The defendant therefore when these records were sold over the counter since the service of the injunction, had reason to believe that the infringing records thus sold (except those which were sold with knowledge that they were to be used in connection with complainant's reproducer), might and probably would be used in combination with some of these infringing reproducers; it was shown by the proofs in the injunction proceeding that the defendant company supplied large quantities of records for the Talk-o-phone users.

In the case of Thompson-Houston Electric Company *v.* Ohio Brass Company (80 Fed. Rep. p. 712), Judge Taft in delivering the opinion of the Circuit Court of Appeals for the 6th district, said relative to this question as to intention to infringe:

"But where the article can only be used in a patented combination the inference of the maker and seller is certain, and the right of the patentee to injunction ought we think to be equally certain."

THOMSON-HOUSTON ELECTRIC CO. v. OHIO BRASS CO., 80 FED. 712 (C. C. OF A., SIXTH CIRCUIT).

The attention of the Court is called to the decision of Judge Taft in this case on the question of contributory infringement where the authorities are quite fully reviewed.

> "It is well settled that where one makes and sells one element of a combination covered by a patent with the intention and for the purpose of bringing about its use in such a combination he is guilty of contributory infringement and is equally liable to the patentee with him who in fact organizes the complete combination. The leading case on the subject is Wallace *v.* Holmes, 9 Blatchf. 65; 29 Fed. Cas. 79. * * * An infringement of a patent is a tort analogous to trespass or trespass on the case. From the earliest times, all who take part in a trespass, either by actual participation therein or by aiding and abetting it, have been held to be jointly and severally liable for the injury inflicted. There must be some concert of action between him who does the injury and him who is charged with aiding and abetting before the latter can be held liable. When that is present, however, the joint liability of both the principal and the accomplice has been invariably enforced. If this healthful rule is not to apply to trespass upon patent property, then, indeed, the protection which is promised by the constitution and laws of the United States to inventors is a poor sham. Many of the most

valuable patents are combinations of non-patentable elements, and the only effective mode of preventing infringement is by suits against those who, by furnishing the parts which distinguish the combination, make it possible for others to assemble and use the combination, and who, by advertisement of the sale of such parts, and otherwise, intentionally solicit and promote such invasions of the patentee's rights."

Judge Taft further stated:

"It is said that no concert of action by defendant with any one for the purpose of accomplishing an infringement of complainants' patent rights is shown. As already stated, it does appear that defendant is offering for sale articles that can only be used in combinations covered by complainant's claims. This is an effort to secure a concert of action by which the combinations of complainant's patents may be assembled. If successful infringements will follow; hence the preliminary steps which are intentionally taken to bring about the injury may be enjoined."

WALLACE v. HOLMES, 9 BLATCH. 65; 29 FED. CASES, 79.

In this case Judge Woodruff said:

"Here the actual concert with the other is a certain inference from the nature of the case, and the distinct efforts of the defendants to bring the burner in question into use, which can only be done by adding the chimney. The defendants have not, perhaps, made an actual pre-arrangement with any particular person to supply the chimney to be added to the burner; but every sale they make is a proposal to the purchaser to do this, and his purchase is a consent with the defendants that he will do it, or cause it to be done."

This doctrine is quite analogous to that involved in the consideration of the subject of contributory infringement, and is covered by the cases there referred to.

ADDITIONAL AUTHORITIES RE CONTRIBUTORY INFRINGEMENT AND PRESUMPTION OF INTENT.

Schneider *v.* Poutney, 21 Fed., 399.

This case was decided by Judge Nixon, in the Circuit Court, for the District of New Jersey. This was a suit under a patent to one Votti, for a Shade Holder for Lamps, and is particular in point. Judge Nixon in the opinion, p. 403, says:

> "The allegations of the bill of complaint, as to the infringement of the defendant, are (1) that certain shade-holders, made and sold by the defendant, are only used in Votti's combination, and are not applicable to or useful for any other purpose; and (2) that the defendant knew this fact, and made and sold said shade-holders with the knowledge that they could be used by the purchaser thereof in constructing said patented combination in infringement of said patent, and that he made and sold them for that purpose."

Thus we have a parallel with the case at bar, for we have shown that these defendant records are only used in the combination of the patent in suit, and are not applicable to or useful for any other purpose; and further that the defendant knew this fact and made and sold these sound records with the knowledge that they could be used by the purchaser in the patented combination. The learned Judge then further states, as follows, p. 403:

> "In regard to the first allegation, the complainant's expert, Brevoort, and his agent in patent matters, Hanford, both explicitly state that they know of no other uses to which the shade-holder made by the defendant and complained of by the complainant, can be applied, except in combination with the other devices of the Votti patent, and that they never heard of their being put to any other use. This testimony stands uncontradicted except by the suggestion of defendant's counsel of possible use to which such shade-holders might be applied. I recollect nothing from the defendant himself or from any of his witnesses which shows, in fact, any other application."

As in the case at bar, we have the affidavits of Haddon, Middleton and Kennedy, that they know of no other use to which the sound records of the defendant can be applied, and this testimony stands uncontradicted except by the suggestion of the opposing affidavits, that a mechanical feed machine has been advertised, *but not sold*. The learned Judge then says, p. 403, regarding the second allegation that,

> "As to the second allegation, referring to the intent of the defendant in his manufacture of the shade-holder, I think it is fairly to be inferred, (1) from the conversation of the defendant with Hanford; (2) from his attempts to get from the complainant an exclusive right to manufacture the shade-holder; (3) from the tenor of the circulars that he prepared and sent out; and (4) from his absolute silence when upon the witness stand in regard to any other use for which he manufactured them, that his intent in making and selling them was to have them used in combination with the other devices of the complainant's patent."

So also in the present case, we submit the inference is stronger when it is borne in mind that Leeds knew that thousands of infringing machines were in public use all over this country and that these defendant records could only be used with that class of machine, in the combination of the patent in suit, which machines this defendant had also sold, and also knew that this alleged mechanical feed machine was not on the market. With the facts as above set forth, Judge Nixon stated, p. 403, the law as follows:

> "The law in such cases has been quite definitely settled. The first case to which I would allude is the leading one of Wallace *v.* Holmes, 5 Fisher, 37. The patent there was also for an improved lamp, consisting of the combination of several parts. The alleged infringement was for the manufacturing and selling one of the elements of the combination, to wit, the burner. It was used in combination with a chimney, and the purchasers of the burners were expected to go into the market and procure the chimneys from other manufacturers. Judge

Woodruff held that the defendants could not protect themselves by invoking the well-settled rule that where a patent is for a combination merely, it is not infringed by one who uses one or more of the parts, but not all, to produce the same results either by themselves or by the aid of other devices; but that if one party consented to make the burner, and another party the chimney, and each was sold to be used with the other, the parties must be deemed to be joint infringers of the patent, and that each was liable for all the damages. The learned Judge drew the inference of an actual concert between the parties from the nature of the case, and the distinct efforts of the defendants to bring the burner in question into use, which could only be done by adding the chimney. *He admitted that he found no proof that the defendants had made an actual pre-arrangement with any particular person to supply the chimney to be added to the burner; 'but,' says he, 'every sale they make is a proposal to the purchaser to do this, and his purchase is a consent with the defendants that he will do it, or cause it to be done. The defendants are, therefore, active parties to the whole infringement, consenting and acting to that end, manufacturing and selling for that purpose.'*"

Therefore, as we have seen in Bullock Co. *v.* Westinghouse Co., *supra,* and in this case of Schneider *v.* Pountney, that where one element of the combination is made and sold, with the knowledge that it can only be used in the patented combination, the intent that it shall be used and the intent to contribute to the infringing act is presumed to have been shown and that it is not necessary to show the same affirmatively, for as Judge Nixon, in Schneider *v.* Pountney, said, that although he found no proof that the defendant had made an actual prearrangement, he drew the inference of an actual concert.

In Walker on Patents, in discussing the subject of contributory infringement, the author states, Sec. 407:

"Contributory infringement is intentional aid or co-operation in transactions, which collectively consti-

tute complete infringement. For example, where a person furnishes one part of a patented combination, intending that it shall be assembled with the other parts thereof, and that the complete combination shall be used or sold, that person is liable to an action, as infringer of the patent on the complete combination."

Citing authorities. Further on in this section the author also states:

"Furthermore, where a person furnishes a machine, composition of matter or other article, which is particularly adapted to be used in performing a patented process, and which the person furnishing the same intends shall be thus used, that person is liable as a contributory infringer for any infringement which afterward occurs in accordance with his intention."

In support of this proposition the author refers, among others, to the following cases:

BOYD v. CHERRY, 50 Fed. Rep., 279.

The patent involved in this suit was for a process of raising cream which consisted mainly in water-sealing the milk within the vessel containing it, and also submerging said vessel in water. The defendant made and sold a milk can within which the milk could be water-sealed, and which could be submerged in the water.

The Court stated, in granting the injunction, as follows:

"I doubt very much whether the mechanical appliances described in each of the patents is patentable aside from the process. Considered merely as cans or milk vessels, there would seem to be little, if any, novelty in them. But however this may be, it appears, from an inspection of the Cherry patent itself, that it is intended to cover the process, and that the cans are to be used only for the purpose of raising cream in the manner

described. Besides, the evidence discloses the fact beyond question that the respondent manufactures the "Hawkye pan" and sells it to customers to be used by them in raising cream from milk according to the process described in the Cooley patent. He advertises and sells the can for this very purpose. They are especially adapted to it, and to no other, and the inference arising from their sale, that they are to be used would be very strong. When it is added that they are generally, if not always, accompanied by directions to purchasers as to the mode of using them, which directions require the adoption and use of the Cooley process, it becomes very clear that the fact of infringement is established. Bowker *v.* Dows, 3 Ban. & A. 518; Chemical Works *v.* Hecker, 2 Ban. & A. 351; Wallace *v.* Holmes, 9 Blatchf. 65."

So also in the case at bar, for although the defendant denies the patentability of the record by itself, yet the records which it is selling are capable of use and are intended for use with the reproducer of claim 35, and to be used in carrying out the process and method of claim 5. It is not necessary, in this talking machine art, to put special directions upon the records as to the mode of using them, for there is absolutely no other use for such an article except for reproducing upon a disc talking machine of the character of the patent in suit, and as manufactured by the Victor Talking Machine Company.

Celluloid Mfg. Co., et al., v. American Zylonite Co., et al., 30 Fed. Rep., 437.

The claim of the patent in suit was for a fabric for the manufacture of collars and cuffs, etc., having outer sheets or layers of celluloid, and an inner lining of textile or fibrous material. In this case, two sheets of cloth or muslin, with a paper inner lining, was made by the Taylor & Tapley Company, one of the defendants; then the Zylonite Company placed a thin sheet of zylonite on one side of this fabric

and returned it to the former company, which latter turned down the zylonite so it would be on both sides of the collar, and the defence was that neither made the patented article, and Judge Shipman writing for the Court stated:

> "It is apparent that the American Zylonite Company made the compound sheet for the Taylor and Tapley Company, with knowledge of the method in which it was to be used by that Company in the manufacture of collars, it was engaged with the other defendants in a common purpose to avoid the patent, and, in connection with them, it actually, by their concerted action, infringed the patent."

A motion for preliminary injunction was granted, and in the present case, complainants' affidavits show that the defendant was aware that the records sold by it, and produced in these contempt proceedings, were to be used in completing the combination of the claims of the patent in suit, and in infringement of said patent.

Alabastine Co. v. Payne, 27 Fed. Rep., 559.

The claim of the patent involved was for,

> "a calcimining compound, adapted to be used with brushes, composed of pulverized calcined gypsum, dissolved glue, and cold water, substantially as described."

The defendant used a dry mixture of pulverized calcined gypsum and glue, which the purchaser reduced to liquid by dissolving in water, and it was claimed that defendant did not infringe the patent. Judge Coxe in denying the motion to dissolve the injunction said:

> "In selling a compound which he knows cannot be practically applied without making the user a trespasser, the defendant, within the doctrine of the following authorities, renders himself an accessory to the infringement: Rumford Chemical Works *v.* Hecker, 2 Ban. & A. 351, 363; Cotton Tie Co. *v.* Simmons, 106

U. S. 89, 94-95; S. C. 1 Sup. Ct. Rep. 52; Tilghman *v.* Proctor, 102 U. S. 707, 728; Goodyear *v.* Railroad Co., 2 Wall Jr. 356, 359; Wallace *v.* Holmes, 9 Blatchf. 65; Woodward *v.* Morrison, 1 Holmes, 125; Bowker *v.* Dows, 3 Ban. & A. 518; Travers *v.* Beyer, 26 Fed. Rep. 450."

This case was cited by Judge Nixon, in the District of New Jersey, in Rumford Chemical Works *v.* Hecker (2 Ban. & A. 351; Federal case, No. 12,133) in deciding that a defendant infringed who sold the constituents of complainant's patent with intent and further purpose of enabling the infringer to turn the compound into bread by the application of water and heat.

And the Courts have gone farther and held that all those who took part in aiding the sale and use of an article in infringement of a patent are liable to be enjoined for such acts.

American Cotton-tie Supply Co. v. McCready, et al. (17 Blatch., 291; Federal case No. 295).

Bill was brought against the officers of the Old Dominion Steamship Company, upon whose steamships the infringing cotton-ties were shipped from New York to ports in southern parts of the United States, where they were sold and used, the defendant refusing to disclose the names of the parties from whom the ties were received, and Judge Blatchford, writing for the Court stated:

"It is entirely clear that the owners of infringing and unlicensed cotton ties, who are causing them to be transported by the vessels of the Old Dominion Steamship Company, are sending them for sale and use, and are employing said company and its officers as agents and servants in promoting and effecting such sale and use. It would seem, on principle, that there ought to be no difficulty in restraining by injunction all persons, whether officers of a corporation or not, who are aiding

in the promotion of the infringing sale and use, whether such persons would be liable for profits or damages or not. It has been so held by this Court."

This was a case, as will be seen, where the defendant had not even manufactured, used or sold the infringing article or any part of it.

Robinson on Patents, Vol. 3., Sec. 905;

> "To sell a part of the invention with the intent that it shall be united or used in connection with its other parts, to sell a different article with the intent that in its use it shall become the one claimed in the patent, to transport knowingly for use and sale in collusion with infringing makers or vendors, are also acts of infringement."

Snyder, *et al.*, *v.* Bunnell, *et al.*, 29 Fed. Rep. 47.

The statement of Coxe, J., in the above entitled cause is particularly in point (Page 48, 29 Fed. Rep).

> "The complainants invoke the doctrine of contributory infringement, the clearest illustration of which is, perhaps, found in Wallace *v.* Holmes, 9 Blatchf. 65. In that case the complainants had a patent for a burner in combination with a chimney. The defendants manufactured and sold the burner, leaving the purchaser to supply the chimney, without which the burner was useless. The burner could not be used without infringing the patent. All this the defendants knew. It was because of this use and this knowledge that they were held liable. See, also, Richardson *v.* Noyes, 10 O. G. 501; Bowker *v.* Dows, 3 Ban. & A. 518; Alabastine Co. *v.* Payne, 27 Fed. Rep. 559; Travers *v.* Beyer, 26 Fed. Rep. 450; Cotton Tie Co. *v.* Simmons, 106 U. S. 89; S. C. 1 Sup. Ct. Rep. 52."

The Doctrine of Repair Has No Application to the Present Suit.

It is respectfully submitted that the doctrine of "repair" cannot be invoked in this case.

Davis Electrical Works v. Electric Light Co., et al., 60 Fed. Rep., 276.

In this case it was held that the defendant infringed the Edison incandescent electric lamp patent, because he substituted in an old lamp the vital element of the combination, viz., the filament. The defendant bought old lamps, made a hole in the bulb, put in a new filament, exhausted the air, and closed the hole.

The claim read as follows:

> "(2) The combination of carbon filaments with a receiver made entirely of glass, and conductors passing through the glass, and from which receiver the air is exhausted, for the purposes set forth."

Thomson-Houston Electric Co. v. Kelsey Electric Railway Specialty Co., et al., 75 Fed. Rep., 1005 (C. C. of A., Second Circuit).

In this case, while the Court held that a broken trolley stand, one of the elements, might be replaced, it said:

> "It is not intended to permit the unauthorized substitution of the vital and distinctively new part of an invention in place of one worn out by use, as the substitution of a new filament in an Edison incandescent lamp or the substitution of a new for the old burner in the Wallace case."

Merrin v. Robert White Engineering Works (C. C., 138 Fed. Rep., 68).

This case stated numerous instances where repairs could be effected of ordinary working parts, and concluded:

> "But a part of a combination may not be replaced by the purchaser when it is the vital element of the combination, in fact, and in regard to patentability, especially when it is not intended to be of short life by the action of external forces thereon."

Red Jacket Manufacturing Co. v. Davis, 82 Fed. Rep., 432 (C. C. of A., Seventh Circuit).

In this case it was held that the making and selling of pumps, leaving out one of the important elements to be supplied by the purchaser was an infringement. The Court said:

> "They do not indeed make the lower cylinder, but they manufacture pumps to be used in tubular wells, the tube and valve placed therein supplying the lower cylinder and valve of the patent. Their pumps are inoperative and useless unless so constructed. The case presented is therefore on of contributory infringement."

STEARNS *v.* PHILIPS, 43 FED. REP. 792.

In this case the Court held that while the making of the bars for the patented window frame screen was not in itself an infringement, the making of them with an intention to combine them in the patented device was an infringement.

By defendant's citation of the case of Aiken *v.* Manchester Print Works, 2 Cliff, 435 (Defendant's Brief, p. 59), he attempts in substance to contend that if any element of a patented combination, even though a combination consisting only of two elements, no matter how vital and important the element may be, is not patented itself by separate patent independent of the patent of the combination, the purchaser of the combination and any one for him can make that vital and important element *ad libitum*.

Under circumstances of this character his argument would apply equally as well *to the other element* of the combination, and as a consequence involve a *reductio ad absurdum*, viz, that all the elements could be re-made and in multiple quantities, thus practically annulling and destroying the patent of the combination, even though the

same may have been sustained by the highest Court of the land.

In the case of Aiken *v.* Manchester Print Works the needles of the knitting machine were also patented by a separate patent, but this case did not mean to decide that only such elements of a patented combination which were patented by a separate patent could be protected against contributory infringement.

The attention of the Court is called to the case of Wagner Typewriter Co. *v.* Webster Co., 144 Fed. Rep. 495, cited on page 59 of defendant's brief, in which Judge Ray reviews the authorities quite fully and the extent of the doctrine of repair. He distinguishes between an element of the combination which is an *ordinary working part* and an element of the combination which is *a vital element.*

RE DEFENDANT'S POINT TWO.

Under this head the defendant contends that the purchaser of a patented combination has the legal right immediately to substitute for an important or essential element of the combination one which he conceives to be *better suited* to his purposes, even though such element was intended to be permanent.

Defendant's counsel in an attempt to support this proposition (brief, p. 60), refers to the Trolley Stand decision in the case of Thompson-Houston Electric Co. *v.* Kelsey Electric Railway and Specialty Co., et al., 75 Fed. Rep. 1005. This is a decision of this Honorable Court of Appeals for the second circuit rendered by Judge Shipman.

The trolley stand, so called, was the means by which the trailing arm was hinged and pivoted to the car, which arm has a capacity for lateral and vertical movement, and is pressed upward by some suitable spring. No particular

stand was included in the patent. The defendant sold stands, one of which was purchased and used for the purpose of the infringement complained of.

This case involves a very materially different question, in that among other things the trolley stand was not the vital element of the combination, such as the defendant's record in suit at bar, and the Trolley Stand case turned upon the doctrine of repairs in cases similar to that of the replacement of the knives in the planing machine in Wilson *v.* Simpson, 9 How. 109, and like cases, the Court distinguishing the Trolley Stand case from the Filiment in Davis Electrical Works *v.* Edison Electric Light Co., 60 Fed. Rep. 276. The Court in deciding the right to replace the trolley stand said:

> "It is not intended to permit the unauthorized substitution of the vital and distinctively new part of an invention, in place of one worn out by use, as the substitution of a new filament in the Edison Incandescent Lamp, or the substitution of a new for an old burner in the Wallace case, *supra* (Holmes *v.* Wallace, 9 Blach. 65; Fed. cases, No. 17,100), but the trolley stand is not the vital element of the invention, though a portion of it is an element of the combination. It is the means, and in most cases the non-patented means, for there are numerous forms of these bases by which the pole is permitted to perform it functions."

It also appeared in this case that the purchaser of the trolley stand had a reason for substituting this stand, which was less elevated above the top of the car than complainant's stand, because of the low bridges under which the trolley cars on some of the streets were obliged to go, and that the defendant had a right to sell and the purchaser to use such a stand for the purpose.

In this case his Honor Judge Wallace filed a dissenting opinion, in which he set forth the fact that the defendant had a perfect right to make such an element of the patented combination as a trolley stand, and that the defendant was

under no obligation to inquire whether the purchaser intended to make an illegal use of it. In that case there was apparently no evidence that the defendant knew that the trolley stands were to be used by the defendant in the patented combination, and there was no obligation on the defendant to inquire.

In the case at bar, however, the defendant sold a most vital element of a two-part combination with the knowledge in one instance that the purchaser, Platz, dealt exclusively in complainant's patented goods, machines and records, and in another case sold to individuals with the knowledge that they were to be used on complainant's reproducer. Bennett's affidavit (Contempt Record, p. 28), states, "I asked him (defendant's salesman) if I could use these (defendant's contempt) records on this Victor Talking Machine (a Victor V) and he told me that I could, and went on further to state that he had at his home a Victor Talking Machine on which he played similar records." Also Thompson's affidavit (Contempt Record, p. 31), states:

> "I then asked said (defendant's) salesman if I could use said records which I so intended to purchase on a talking machine of the manufacture of the Victor Talking Machine Company, and said salesman in reply to said inquiry said that I could."

He then bought the said records.

Judge Wallace in this connection states, in the above mentioned case:

> "One who assists another to infringe a patent is, of course, a *tort feasor;* and whether he is called a contributory infringer or merely an infringer is only a matter of nomenclature."

Judge Wallace, however, shows that where the evidence of unlawful intent on the part of the defendant is shown in cases of this character there is contributory infringement.

The order in this above mentioned case was particular to state, *"but this permission does not give authority to reconstruct or rebuild a combination which has been sold by the complainant."*

This case allowed the right to substitute a metal trolley stand, which was a minor element of the combination, for the one purchased from the patentee, as the purchaser, the trolley company, found that the original stand was elevated too high above the roof of the car for convenience in going under certain low bridges.

It will be noted that this was *a substitution,* that is, the old stand was discarded and the new one put in its place. This has nothing to do with the proposition of the purchase of numerous sound records as a means of increasing a repertory.

It is respectfully submitted that there is nothing in this trolley stand case which is in conflict with complainant's position, and that it certainly does not support the defendant's position as regards the present case.

Defendant Contends it has Right to Substitute or add 1000 Records.

Defendant's counsel contends (Defendant's Brief, p. 63), that if the purchaser has the right to substitute one sound record for a sound record purchased from complainant with the reproducer, he has the right to substitute or add *a thousand records* for use on the reproducer, as well as a single record, for the original one purchased.

This we submit is clear evidence of the extremes to which defendant's doctrines go, and of the erroneous position which defendant's counsel has taken.

This is substitution run wild.

The complainant' poition is in no manner contrary to the principles laid down n Chaffee *v.* Belting Co., 22 How., 217, and cases therein cited, but the principles therein stated

are in accord with the principles underlying complainant's contention.

In the present case the complainant's reproducer, as shown by Mr. Haddon's affidavit, which is only one part of the combination, is sold for a price which only relates to the reproducer. Complainant's records, though they may be sold with the reproducer are sold for a distinct, independent price, and the purchaser can purchase as many records with each reproducer from the complainant as he desires to, either at that time or from time to time thereafter. The sale of the reproducer only pays a royalty on that one element of the combination, and it therefore cannot free the other element. The sale of the record at an independent price frees that particular record, but it does not free the other element.

As shown by Mr. Haddon's affidavit, if the sale of the reproducer, one element of the combination, was going to free also the record, the other element of the combination, without a purchase of that element of the combination from the complainant, then the price of the reproducer, in order to give to the complainant its proper reasonable profit for the entire patented combination, would have to be changed and raised.

It is therefore clear that the doctrines of Mitchell *v.* Hawley, 16 Wall., 544, and other cases cited on pp. 65-67 of defendant's brief, have no application, at least as far as this point is concerned, to the case at bar.

RE DEFENDANT'S POINT THREE.

Defendant very naturally seeks to draw a distinction between the decision of Judge Shipman in American Graphophone Co. *v.* Leeds (87 Fed. Rep., p. 873), and Same *v.* Amet (74 Fed. Rep., p. 789), on the one hand, and the infringement in the case at bar on the other hand. (See Defendant's Brief, p. 68, etc.)

Re American Graphophone Co. v. Leeds.

The decision of Judge Shipman, in the case of American Graphophone Co. *v.* Leeds, *supra*, is markedly applicable to the case at bar, as the circumstances of the two cases are quite similar. Some of the claims of the patent in suit involved the combination of the reproducing style, and the wax cylinder record of the vertically undulating type. The defendant sold an infringing reproducer for the purpose of reproducing sound from records made and sold by the complainant. The defendant defended largely on the ground that, as the complainant sold the records, the purchaser had an implied license or right to supply the reproducing element. Judge Shipman, however, held that this was not so, and that the sale of the reproducing element was a contributory infringement.

He said (87 Fed. Rep., p. 878):

> "The defendants' device is an economical infringement of one element of the claim, which is sold for the purpose of being used in connection with the other element. The design of the defendants' machine, and their intent in selling it, are to have it used in connection with the engraved sound record of the complainant. * * * Infringement of the combination of claims 22, 23 and 24 is the legal result."

The Court had previously said that

> "The defendants' machine is simply for the purpose of reproducing the customary wax-like sound records of the patent, which are cut in a groove with sloping walls."

It is respectfully submitted that the circumstances of this Leeds case, and of the case at bar are very similar, and that the doctrines as laid down by Judge Shipman, are decisive of the case at bar.

Defendant's counsel, however, (Defendant's Brief, p. 68, etc.) attempts to differentiate this case from the case

at bar, on the ground that the reproducer was sold by the defendant in that case, and not the record, and that, therefore, the reproducer corresponded to the fixture of the Morgan Envelope Co., case, and the planing machine case, and differed, therefore, from the case at bar.

It will be observed, however, that Judge Shipman practically decides this point involved in the case at bar, by showing that the reproducer of a talking machine is no more important an element than the sound record. He shows that they are both equally important to the patented combination, and says that they are *"equally important."*

Judge Shipman, said:

> "The material of the record and the reproducer are each necessary parts of the invention. Either part without the other would be ineffectual, but in combination both tend to make an operative and successful instrument."

Judge Shipman also here quotes from the decision of Judge Grosscup in American Graphophone Co. *v.* Amet, (74 Fed. Rep. 789) where Judge Grosscup also regards the two elements of equal importance, in fact, he seems to regard the sound record of greater importance, if anything.

Judge Grosscup says:

> "Either, without the other, would be useless for the purpose of a graphophone or phonograph. Together they bring about a successful result. They therefore constitute a patentable combination."

Judge Shipman also says:

> "This peculiarity of the dual invention of the material for an engraved record and the reproducer, and the fact that the latter was brought into being to make the former of practical value, is of much importance in the proper construction of the quoted claims of the patent, if it should be held that the reproducer alone, though novel, is not patentable."

It will therefore be seen that both Judge Shipman and Judge Grosscup, in these cases, in considering a sound reproducing apparatus, consisting of a reproducer and a record; **regarding the record as of equal, if not greater, importance than the producer element.**

It will also be borne in mind that the case at bar is even stronger in this regard than the American Graphophone *v.* Leeds, or the Amet case, as in those cases the record element was a destructible *wax* cylindrical record, not a record of hard, indestructible material, like the complainants' disc in this case.

It is, therefore, apparent that neither Judge Shipman nor Judge Grosscup regarded the reproducing element of the combination as any more durable, or important, than the record element, and that defendant's effort to liken these cases to the Morgan Envelope Co., case, and to the planing machine case must fail.

We have, therefore, the material question involved in the case at bar substantially adjudicated in American Graphophone Co. *v.* Leeds, and in the Amet case.

The defendant also (Brief, p. 68) tries to distinguish these cases from the case at bar, on the ground that they were for contributory infringement.

That is exactly what the defendant in the case at bar is liable for, among other things. The cases which have held that they were not cases of contributory infringement, are cases where the defendant has been held to do no wrong, and of course, therefore, could not be chargeable with contributing to a wrong.

If, however, the defendant is found to have done a wrong under the circumstances of the present case, he is chargeable with contributory infringement, as in the American Graphophone Co. *v.* Leeds, and in the Amet case.

It would make no difference, in the decision in the American Graphophone Co., *v.* Leeds, or in the Amet case, whether the American Graphophone Co., had sold repro-

ducing apparatus with their records, or whether they sold records without the reproducing apparatus, as in either case the defendant would be liable for contributory infringement.

That Judge Shipman, in his decision in the trolley stand case (Thomson Houston Electric Co. *v.* Kelsey & Co., 75 Fed. Rep. 1005) never intended that the rule laid down by him in the trolley stand case should be applicable to the records or reproducing apparatus of a talking machine, is clear from his decision in American Graphophone Co., *v.* Leeds, he having also rendered the decision in the trolley stand case.

Re American Graphophone Co. v. Amet, 74 Fed. Rep., 789.

The defendant contends, (Brief, p. 69, etc.) that Judge Grosscup clearly recognized the alleged right of the purchaser from the patentee of the sound reproducing apparatus to replace the records, originally purchased as part of the combination, with an unlicensed record. This, we submit, is an unwarranted inference, and that Judge Grosscup makes no such decision. The claims in controversy in that case were claims 22 and 24 of the Bell and Tainter Patent, No. 341,214, the said claims being two of the same claims involved in American Graphophone Co., *v.* Leeds.

That Judge Grosscup regarded the two elements of the combination, viz.—the reproducing stylus, and the cylindrical wax record, of equal importance has hereinbefore been pointed out. He says:

> "Either, without the other, would be useless for the purpose of a graphophone or phonograph. Together they bring about a successful result. They, therefore, constitute a patentable combination."

The defendant, as in the Leeds case, made and sold a reproducer, one part of the combination, which was in-

tended to be used in conjunction with complainant's cylindrical records. Judge Grosscup said:

> "Without the complainant's record the defendant's device would be useless. It is never used except in connection with complainant's record. In the practical use, therefore, of defendant's device, one of the elements of complainant's combination is actually and necessarily employed."

Judge Grosscup also stated:

> "It appears, however, that these records are sold by the complainant on the open market, and it is contended that such sale releases this element of the combination from the monopoly of the patent. I do not concur in this view. To make the graphophone more widely useful, the complainants make many records, embodying music, speech, and other sounds, and distribute these, by sale, to the users of the phone. But the record thus distributed remains an integral part of the combined mechanism. It is not a product of the machine, but still a part of it."

Judge Grosscup, therefore, decides that no implied license to make, or sell, or use the other part of the combination, is granted by the sale of one part of the combination of a sound-reproducing apparatus to a purchaser.

Judge Grosscup also decides that the part sold remains an integral part of the combined mechanism.

Judge Grosscup also draws the distinction between this and many other cases, in that in sound reproducing apparatus, the object and intent of the owners of the patent is to sell records **having different selections thereon to the users of the phone.**

He also shows that in sound reproducing apparatus, the record is *not a product* of the machine, but is a part of it.

Defendant's counsel, on page 70 of the brief, italicizes certain portions of the quotation from Judge Grosscup's opinion in this case, which defendant's counsel evidently

misunderstands. If the defendant's construction of the italicized portion should have been intended, the injunction which Judge Grosscup granted would not be a logical sequence, nor would Judge Grosscup's conclusions follow.

It is clear, from a careful reading of the entire decision, that he did not mean what defendant's counsel interprets. After Judge Grosscup had made the statement of the above quoted portion of his decision, he went on to state (being the portion italicized in Defendant's Brief):

> "It is not unusual, in many mechanisms, that some elements of their combination must be more frequently renewed than others. The sale of such parts, segregated from the machine, is only the replenishing of the combination by a substitution of a new element for the one worn out. Such action does not break the patentability of the combination. So, in this combination, substitution by sale of one or many records for another, though not due to the same necessity, ought to receive the same consideration."

Judge Grosscup meant that the sale, of such parts referred to, by the patentee "does not break the patentability of the combination", or, in other words, does not imply any license to the purchaser to make or sell the other part—the patentability of the combination is not broken by such action.

Judge Grosscup then goes on to say:

> "So, in this combination, substitution by sale of one or many records for another (by the patentee), though not due to the same necessity, ought to receive the same consideration."

That is, the sale by the patentee of this record, a material part of the patented combination, ought to receive the same consideration, and does not break the patentability of the combination, and does not imply rights to the purchaser to substitute.

Judge Grosscup then cites the instances of the keys of

a piano, which he evidently means may be replaced by the patentee without releasing the combination, of which the keys are an element, from the monopoly of the patent; and then goes on to state that he sees no reason why the record of a graphophone may not, though for a different purpose, be likewise replaced by the patentee, without breaking the validity of the combination of his patent.

This construction is in strict accord with Judge Grosscup's opinion in this case, and is the only logical construction, especially in view of the sentence which immediately follows the above quotation as a conclusion, viz.—

> "Inasmuch, therefore, as defendant's device is only to be used in connection with one of the elements of complainant's patentable combination, I am of the opinion that it infringes such combination as is expressed in claims 22 and 24, already quoted."

The defendant's counsel (p. 71) endeavors to draw a distinction between the Amet case and the case at bar, that in the case at bar, there was an implied license by the sale of the reproducer and the record. It will be observed, however, that Judge Grosscup distinctly points out, where an implied license is contended for, that he does not concur in this view.

In the Amet case, Judge Grosscup shows that the complainants made many records, embodying music, speech, and other sounds, to sell to users of the patented phone.

There is also, therefore, no warrant for the alleged distinction which the defendant seeks to draw between these two cases namely, that in the Amet case there was no purchase of the combination from the patentee. Such a distinction is manifestly unwarranted, from a careful reading of the Amet case.

RE DEFENDANT'S POINT FOUR.

By this point, defendant contends that the complainant should have sold the reproducers *with restrictions,* to the effect, that nobody except the complainant could supply records to complete the combination.

The defendant, in support of this proposition, cites Heaton Co. *v.* Eureka Co., 77 Fed. Rep., 288.

This case cited has nothing to do with the case at bar, and involves a very different proposition by reason of the different state of facts. It is doubtless cited, because the decision refers, among other things, to Wilson *v.* Simpson, the planing machine case, and to the Morgan Envelope Co., case, which have heretofore been fully considered, and the distinctions pointed out.

It is also respectfully submitted that the cases cited on page 74 of Defendant's Brief, of Rupp *v.* Elliott, (131 Fed. Rep., 730), Tubular Co. *v.* O'Brien, (93 Fed. Rep. 200), Cortelyou *v.* Johnson, (145 Fed. Rep. 933), and Edison Electric Light Co. *v.* Peninsular Co., (131 Fed. Rep. 831) have no bearing upon the case at bar.

RE DEFENDANT'S POINT FIVE.

The defendant, in this point, contends (Brief, p. 76), that the records in suit could have been used on a so-called "mechanical feed" device, and could have been sold for export to foreign countries, and therefore, there would be no infringement.

It is also respectfully submitted, as hereinbefore clearly pointed out, (pp. 60-67, of this brief) that there were not, at the time of the contempt, and are not now the so-called "mechanical feed" devices in commercial use, upon which the contempt records could have been used. The defendant has utterly failed to prove that there were in commercial use any such mechanical feed devices, upon which said rec-

ords could have been used, for reproducing purposes. There were and are in use a large number of mechanical feed devices, for reproducing sound from *cylindrical records, such as the phonographs and graphophones,* where the cylinder is placed upon a mandrel, but defendant's records could not possibly be used in connection with these mechanical feed devices. There were none, and are none, in commercial use, which could reproduce sound from the contempt records, and the only reproducers in commercial use, in combination with which the contempt records could be used to reproduce sound, were those constructed in accordance with complainant's patent in suit, claims 5 and 35, as shown by the affidavits of Mr. Haddon and Mr. Middleton, and of these there are many thousands.

It is respectfully submitted that this point of defendant is utterly futile.

As regards records for export, there is no evidence that the defendant made any such sales of the contempt records for this purpose, if it had the right.

The evidence is clear as hereinbefore pointed out, that the contempt records sold to Platz and to Thompson, and some of those sold to Bennett, were sold with the full knowledge that they were to be used in connection with the reproducer of the complainant. *An intent to contribute to the infringement by the sale of contempt records is therefore clear, and requires no further proof.*

The fact is, also, that the only reproducers in commercial use, with which the contempt records could be used in reproducing sound, were the reproducers made in accordance with complainant's patent, for use in combination with such records.

The case of Cortelyou *v.* Johnson & Co., (145 Fed. Rep. 933), cited on page 78 of Defendant's Brief, in the part there quoted substantiates complainant's contention in this case, and shows the defendant, in the circumstances of the present case, to be guilty of contributory infringement,

as the defendant in this case sold one of the vital elements of the two part combination, with knowledge that it was to be used in combination with the other element of the combination.

RE DEFENDANT'S POINT SIX.

The defendant, by this point, seeks to contend that the complainant, by the sale of the reproducing apparatus of claim 35, implies a license to the purchaser to buy from others a suitable record, where the apparatus was sold without a sound record. (Defendant's Brief, p. 81.)

This point has been hereinbefore considered, and it will be unnecessary to discuss again the subject at length. Suffice it to say that this question is particularly decided in

American Graphophone Co. *v.* Leeds, 87 Fed. Rep., 873;

American Graphophone Co. *v.* Amet, 74 Fed. Rep., 789;

American Graphophone Co. *v.* Hawthorne, et al., 92 Fed. Rep. 516.

Roosevelt v. Western Electric Co., 20 Fed. Rep. 724.

In this latter case, Judge Wallace (U. S. C. C., So. Dist. of N. Y.,) said:

> "The case made by the motion papers is this: The complainant's patent is for an improvement in electric batteries consisting of a prism and other elements, and the claims are for the prism, and for various elements in combination with it. The defendant is selling an electric battery which contains the prism in combination with several other elements which are covered by the claims of the patent; having purchased the prisms from complainant, but having obtained the other elements of the battery from other sources.

"If it were true that the prisms are not capable of any use except in combination with the other elements covered by the several claims of the patent, the complainant can nevertheless insist that the purchasers should only be permitted to use them as substitutes for prisms which have been deteriorated or destroyed, or to sell to others. They could be used in this way without infringing the complainant's rights. * * * The motion for an injunction is granted."

See also United Nickel Co. v. California Electrical Works, 25 Fed. Rep., 475.
Thomson-Houston Electric Co. v. Ohio Brass Co., 80 Fed. Rep., 712.
Wallace v. Holmes, 9 Blatch., 65, 29 Fed. Cas. 79; 5 Fish. Pat. Cases, 37.

National Phonograph Co. v. Fletcher (117 Fed. Rep., 149).

This was a case where the defendant took the complainant's sound reproducers for phonographs, which needed no repairs, and returned them with the substitution of parts.

The defendant in this case thus made it possible for the purchasers of the complainant's phonographs and reproducers, to use that which was supplied by the defendant, and which was a part of the patented combination, in connection with, and as a substitute for, that which was sold by the complainant, and which was also part of the patented combination.

So also, in the case at bar, the defendant manufactures and sells and supplies, to the purchasers of complainants' reproducing apparatus and records (the only two elements of the patented combination, and neither of which needed to be repaired), additional records, one of the two elements of the patented combination, to be used by the purchaser of complainant's patented combination, as a substitute for one of the elements of the patented combination.

The law relating to the doctrine of repair is, therefore, inapplicable, or as Judge Thomas stated:

> "From the foregoing it is observed that there is no occasion for repairs, and hence the law relating to that subject has no specific application. * * * The modification, SUBSTITUTION, and change of relation of parts, passes the limit of allowable repairs. Reproduction, not restoration, is intended, for there is no occasion for restoration."

So also in the case at bar, as pointed out elsewhere, the purchase of additional records is not for the purpose of the repair or restoration, but for increasing repertory of selections, and to carry out the intended purpose of the complainants, in the manner in which the reproducers and records of the patented combination are placed upon the market. We have shown that these records are of hard, indestructible material, with a practically unlimited capacity for reproducing the sounds recorded thereon.

On page 64 of the defendant's Brief, *Chaffee* v. *Belting Co.*, 22 How., 217, is cited and quoted, as an alleged authority to justify the defendant in manufacturing and selling the contempt records for use in connection with complainant's reproducer in the combination of claim 35, and to carry out the method of claim 5, of the patent in suit, under what counsel for defendant terms the "*right of substitution.*"

This decision in *Chaffee* v. *Belting Co., supra,* is discussed and explained, in connection with the law relating to repairs, by Judge Thomas in National Phonograph Co. *v.* Fletcher (117 Fed. Rep. 149).

Defendant's counsel italicises the latter part of his quotation from this decision in Chaffee *v.* Belting Co., namely:

> "*he may repair it or improve upon it, as he pleases, in the same manner as if dealing with property of any other kind.*"

Judge Thomas, in *National Phonograph Co.* v. *Fletcher, supra,* quotes the same matter, stating that in *Chaffee* v. *Belting Co.,* the Court said that it was true that the Supreme

Court stated as thus quoted; but Judge Thomas explained this quotation and said:

"This decision goes no further than this, that an individual owner may do what he will with a patented machine or article which is his property. * * * What a man may do for his own use, with property made pursuant to a patent, is not what he may do for the purpose of selling as another's patented article.

Thus it will be seen, that even if it is admitted, for the purpose of discussion, which we do not, that a purchaser of complainant's reproducer and records, would have the right to make new records, this decision of the Supreme Court in *Chaffee* v. *Belting Co., supra,* as thus explained by Judge Thomas, would not extend that right, if such a right existed, to the defendant to *manufacture and sell* the said disc sound records (an element of the sustained claims), whose office and function is to vibrate and propel the reproducing stylus, as specified in these sustained claims 5 and 35, of the patent in suit.

And furthermore this decision of Judge Thomas in National Phonograph Co. *v.* Fletcher, is an authority supporting one of complainants' contentions in this case, namely, that the law relating to the doctrine of repair is not here involved, since no repair is necessary.

NO IMPLIED LICENSE, AS THE REPRODUCING APPARATUS IS NOT THE COMPLETE PATENTED THING.

The general rule which implies a license to use a patented machine for the purposes for which it was intended always presupposes that the *completed* patented thing is embodied in the machine.

If, as in this case, the device, or apparatus, sold **only embodies one element** of the combination, the complete pat-

ented article is not sold. In the case at bar there could be no greater implied right to use an infringing record by the sale of a reproducing device than there would be an implied right to make or use a reproducing device by reason of the sale of a record by the complainant.

Robinson on Patents (Vol. 2, Sec. 825,) says:

> "The sale of a **complete** article by one who owns a patent," implies a license.

Robinson on Patents also states, at the beginning of the same paragraph (825):

> "The sale from which this universal license is implied, must, moreover, be a sale of **the precise article covered by the patent.**"

The reproducing apparatus is an *incomplete* portion of the claim, and is not, therefore, by any means, the precise article, as it lacks the material element of the record in combination.

If one element of the combination is omitted, the thing sold is not a complete patented thing. *It is not the precise article.*

The fact that it is incomplete implies on its face that there is something missing.

The purchaser and the world has notice by the Victor Company's most extensive advertising, that the Victor Company makes and sells the records to be used in combination with the reproducing apparatus.

The sale by the Victor Company of a reproducing apparatus is not an unconditional sale; it is, by the very fact that the record is still required to be purchased by the purchaser, **a conditional sale.**

UNITED NICKEL COMPANY v. CALIFORNIA ELECTRICAL WORKS, 25 FED. REP. 475.

In this case, the Court held that the purchasers by the defendant of one element of a chemical composition did not imply a license that the defendants could use that element in combination with other elements claimed in the claims in controversy in the patent in suit. The Court said (p. 479):

> "The fact that they (the defendants) purchase from authorized agents this solution which enables them to nickel-plate does not, inferentially or otherise, authorize them to use it in nickel-plating without obtaining a license to use the invention covered by the other claims. They must also get a license to use the invention covered by the other claims, or they cannot use this without being liable as infringers. Each claim is, in effect, a separate and distinct patent; and the right to use one patent does not carry with it the right to use the others without a further license."

The Price of the Reproducing Apparatus is Merely a Portion of the Patent Profit. The Patent Profit is Divided. A Portion is Acquired from the Reproducing Apparatus and the Balance from the Record.

The Victor Company, in selling one element, only receives the price of that element, and not the price of the complete patented thing. The price is so scaled that the complainant must receive its total profit from the sale of both of the elements,, in order to receive the total profit to which it is entitled.

Therefore, the Victor Company never receives its compensation for the complete thing, patented in the claims 5 and 35, until it receives both the portion of the profit which is attached to the record and the portion of the profit which is attached to the reproducing apparatus.

If the defendant's contention be true, the complainants would have to raise their price of the reproducing ap-

paratus so as to acquire the entire profit of the patent from that one element. This is shown by the affidavits of Mr. Haddon and Mr. Middleton.

Robinson on Patents (Sec. 824, Vol. 2) says:

> "This implied license rests upon the principle that the owner of the patented invention having once received his recompense for releasing the article from the monopoly, either in its price directly paid to him or in the license fee which he collects from its vendor, he can, therefore, neither limit nor demand compensation for its use; but by the sale delivers it from all the restrictions of the patent and makes it common property, like any other personal estate."

It is, therefore, obvious that the underlying theory contended for by the defendant does not pertain in the case at bar, among other reasons, for the reasons:

(1) That the reproducing device sold is not the complete patented thing.

(2) That the owner of the patent only receives a portion of the patent profit from the sale of the reproducing device, and relies upon the sale of the other element of the patented thing for the balance of the patent profit.

(3) That the sale of the reproducing device does not, and cannot, release, therefore, the record, the other element of the combination from the patent monopoly.

(4) That the Victor Company has been making and selling records, for use in combination with the reproducing device, for a number of years, and has so notified its purchasers and the world generally, by extensive advertisement of this fact. The Victor Company derives a large portion of its profit from the patented device from the sale of these records.

(5) That the purchaser of a Victor machine, or reproducing device, almost invariably purchases Victor records with it, which allows him to full enjoyment of the patented combination purchased and method, and no implied license to make or use infringing records could possibly be inferred.

(6) That the defendant's contention is illogical, among other reasons, for the reason that if the contention were true, the sale of a record by the complainant, the other element of the combination would equally as strongly imply a license to make, or sell, reproducing device.

(7) That there can certainly be no implied right to a third party, such as the defendant company, to manufacture and sell records to purchasers of complainants' reproducing device.

The Purchaser of Complainants' Reproducing Device Has Every Opportunity to Use and Enjoy it in a Legitimate Manner by Purchasing Complainants' Records which it is Ready to Supply.

There can be no serious contention that the purchaser of complainants' reproducing device is restricted in the enjoyment of its use if it cannot use infringing records.

The largest part of the Victor Company's business is devoted to manufacturing and selling disc records for use in connection with its reproducing device, and has invested many hundreds of thousands of dollars for this purpose.

The Victor Company, for this purpose, employs the best and highest priced talent, for rendering selections from which to produce records, paying as much as a thousand dollars for a single selection, in some cases. It supplies all kinds of selections—records of the voices of great singers, records of famous bands, such as Sousa's, records of melo-

dies and instrumentations, records of comic recitationists, etc., etc.

The Victor Talking Machine Company spends large sums of money yearly in its monthly catalogues, containing long lists of new records each month, and is perhaps the largest producer of disc talking machine records in the world, and has the reputation of producing the best.

It supplies these records to the public at a reasonable figure, at substantially the same price as these infringers.

All these records of the Victor Talking Machine Company are made for sale and use in connection and in combination with the reproducing device called for in the combination of claim 35 of the patent in suit, to be used according to the method of claim 5. It has distributors and dealers all over the United States.

Certainly, therefore, there can be no contention that the purchaser of a reproducing device cannot enjoy to the full the use of the said apparatus, or machine, which he has purchased from the complainant.

The purchaser has always the opportunity to procure additional Victor records, and thus to enjoy the benefit of his reproducing apparatus to the full; he has also the right to sell his machine to others for similar use.

Further, the complainants have granted licenses under the patent in suit to other companies, who have made and sold disc records in large quantities, which were licensed records, which the purchaser would have the right to enjoy and use in combination with a legitimate reproducer.

Those who are now making infringing records are comparatively few, and the only effect upon the purchaser of a legitimate machine, if the complainants' contention is sustained, would be to prevent the defendant from selling him infringing records.

THE DEFENDANT IN SELLING RECORDS INFRINGES THE PROCESS CLAIM.

Westinghouse Electric Mfg. Co. v. Dayton Fan and Motor Co., 106 Fed. Rep. 724.

In this case it was contended that the process patent was susceptible of infringement only by use, and as there was no evidence of use by defendant, there was no infringement. The Court held, that as the purchasers used, the defendant intentionally contributed to the use. Defendant also contended that the claims called for certain elements of combination which they did not make, such as a dynamo circuit and motor, and that as the device as sold by them did not have these they did not infringe. The Court held:

> "There is no evidence to show that it could have any commercial value for any other purpose, and in view of the admissions of the defendant and the absence of any showing whatever to the contrary, it must be regarded as an established fact that it was sold for the purposes of this combination bringing it within the ruling of Thomson-Houston Electric Co. *v.* Ohio Brass Co., 80 Fed. Rep. 712, where it is held that—
>
> " 'One who makes and sells one element of a patented combination, with the intention and for the purpose of bringing about its use in such a combination, is guilty of contributory infringement, and is equally liable with him who in fact organizes the complete combination.' "

If Defendant Can Sell One Element of the Combination, Another Defendant Can Sell the Other, and the Decision of Court of Appeals Nullified.

It should require no argument to convince that a patentee is entitled, under the statute, to the monopoly of manufacturing and selling the whole combination going to make up his patented device.

If the defendant's acts are lawful, the patentee would be only entitled to the monopoly of making and selling parts which constitute half, or a fraction, of the patented structure.

Again, which half of the patented structure would the patentee have the monopoly on, if not upon the whole?

If a party, not the patentee, has a right, without license, to make one-half of the patented structure, which half, or portion, is he entitled to make?

If a party, not the patentee, is entitled to make one-half of the patented structure, why would not some other party, not the patentee, be entitled to make the other half of the patented structure?

The position of the defendant is practically reduced to this proposition, for if defendant's counsel's argument be good, the defendant would be entitled without liability, to make the sound record forming one element of claim 35, and another company, by the same course of reasoning, could not be precluded from making the other part, viz., the reproducing apparatus, with the stylus shaped for engagement with the record, mounted to be used in connection with the traveling tablet having a sound recording stylus shaped for engagement with the record, and free to be vibrated and propelled by it.

If the one proposition be true, the other proposition should be true, and between the two defendants the patentee would have nothing.

They could also thus use the method of claim 5.

In the case of Strobridge *v.* Lindsay, 6 Fed. Rep. 510, Judge Acheson, of the Third Circuit, said in considering the question of the right of the defendant to evade a patent by dividing the patented device into two parts:

> "Truly the plaintiff's success was a barren victory, if by such an alteration as the one here adopted the injunction of this Court can be evaded. But the expedient must fail of its purpose."

No License to Make Records.

Another point upon which defendant's counsel must rely to support his erroneous contention is that the sale of a machine, licenses and empowers anybody, and everyone, to machine's licenses and empowers anybody, and everyone, to *make* and sell records, for the alleged reason that the complainants, having received for such a machine a certain reasonable price, it is not entitled to make a separate charge for a record.

The defendant's contention is in effect that because the Victor Company made and sold these reproducers, anybody and everybody would be licensed to start up factories to manufacture these sound records and to sell them without restraint. Defendant's counsel appears to overlook the fact that Judge Hazel, in the Circuit Court for the Southern District of New York, and the Circuit Court of Appeals, for the Second Circuit, has held that these claims, 5 and 35, were broad and basic claims, and that the record was an essential part of the claim, and that *under the decrees and injunctions the unlicensed manufacture or sale of a record of the patent in suit would be a contempt.*

The sale alone of the reproducing device by the complainants can imply no license to the purchaser to manufacture or sell records, the other and equally important part of these claims.

The authorities on contributory infringement referred to elsewhere are conclusive upon the point that the manufacture or sale of one element of a patented combination, with the intention that it shall be used with the other elements thereof, is an infringement. This case is in no manner different from the other cases where the complainant is engaged in selling both elements of the combination, and this case does not become different from the other cases as to contributory infringement because it happens to be a talking machine composed of a reproducer and a record, instead

of some of the other machines, or devices, referred to in the decisions.

The case of Travers v. Beyer, *et al.*, 26 Fed. Rep. 450, is a case in point, and supports the complainants' contention. This is an opinion by Judge Wallace, in the Southern District of New York, where the claim of the patent sued on, read:

> "The combination of a hammock, A, having suspension ropes, *f*, *f*, with detachable distending blocks, *g*, *g*, which are notched at their lower edge to space said ropes, *f*, *f*, substantially as specified."

In this case the defendants did not make or sell hammocks, but merely manufactured the blocks and sold them to dealers in hammocks, and were adjudged infringers. The Court held that the blocks were of no practical utility or value except for the special purpose of the patentee. And so in the case at bar, these records are of no value, and are incapable of any use, except when combined with a reproducer as set forth in claims 5 and 35.

RE DEFENDANT'S POINT SEVEN.

The defendant, in this point, contends that an intolerable burden has been placed upon defendant's alleged right to make and sell the disc records forming a part of the combination of claim 35. (Defendant's Brief, p. 85).

Defendant seems to think that the Court below has imposed a burden, because Judge Lacombe comments upon the fact that the defendant did not make any effort to restrict the use of the contempt records, by putting a notice thereon, until after the motion regarding the limitation of their legitimate uses, and stated:

> "such notice might fairly go further and advise the purchasers that to use it on one of complainant's machines would make the user an infringer."

Defendant's Brief states that, since the finding in contempt, it has placed upon its records a label, quoted on pages 85 and 86 of Defendant's Brief, which reads as follows:

> "This record is sold for use on all mechanical feed-device machines and upon all licensed Victor, Columbia and Zonophone machines and all other machines licensed under U. S. patent No. 534,543 in replacement of any worn out or broken record thereof. Any other use of this record will be a violation of the conditions under which it is sold and an infringement."

Instead of being in conformity with Judge Lacombe's decision, this label is diametrically the opposite.

It states that these records on which it appears (alleged to have been sold since the contempt order) are sold to be used in connection with the complainant's reproducer of claim 35, and those of its licensees.

This is a most peculiar proceeding, and is apparently an abuse of the Court's order, staying the injunction.

The defendant attempts, to justify it on the ground that the injunction was stayed, pending appeal, and that, therefore, it had the right to make this statement.

This statement, contained on these defendant's records, said to have been put out since the contempt order, is, we submit, in direct violation of the decision of Judge Lacombe in the contempt, *and is a second contempt in itself.*

Many of these records will probably remain in the hands of dealers after Judge Lacombe's contempt order has been sustained by this Court, if it shall be sustained, and create great confusion in the trade, being a notice of an alleged right, which, under these circumstances, would not exist.

It is a responsibility which the defendant has assumed with its eyes open, and for which it should be punished.

Judge Lacombe did not hold that the defendant *must*

label its goods, as the defendant seems to intimate, but evidently regarded the fact that it did not label them with the statement that they were to be used only in connection with mechanical feed machines, until after the contempt proceedings, as suggestive.

The label which the defendant had then prepared to put on is contained on page 82 of the Contempt Record, and states, *inter alia,*

"it is sold for use on mechanical feed machines."

This label, however, was not put on the contempt records, and if it ever was put on any of the defendant's records, it was not placed upon them until after the contempt order. It is this label to which Judge Lacombe referred.

It will also be noted that this label states:

"This record is made from the very finest material **and can be played many times without deterioration.**"

This statement appears to negative the affidavits of defendant, of E. F. Leeds, Bunker and Moeller, relative to durability.

As before pointed out, so-called, "mechanical feed" machines, upon which these records are said to be usable, and are not, and never have been, in commercial use.

The case of Welsbach Light Co. *v.* Union Incandescent Light Co. (101 Fed. Rep. 131), cited on page 88 of Defendant's Brief, would appear to have no application to the case at bar.

RE DEFENDANT'S POINT EIGHT.

The defendant here contends that the question raised upon the motion to punish for contempt was an entirely new question, and that the sale of the contempt records was not included in the preliminary injunction or decree.

As hereinbefore pointed out, it is respectfully submitted that the decree, as well as the preliminary injunction, was as broad as language could make it.

The injunction enjoined the defendant, among other things, from making, selling or using the "reproducing apparatus" specified in the claim, which claim was quoted in the decree. That the words "reproducing apparatus" embodies the record as well as the reproducing stylus is specifically stated in claim 35. The defendant, therefore, was specifically enjoined from making, selling or using "a traveling tablet having a sound record formed thereon"—the disc record—when forming part of the combination with the reproducer of claim 35, or when intended for use in that combination, "And from using or employing in any way the method specified in said Claim 5".

The defendant can hardly, therefore, with any degree of plausibility, contend that the decree did not specifically enjoin it from doing the contempt acts.

There was no new question involved in the contempt proceedings. The question was clearly one which had been before the Courts, not only in the motion for preliminary injunction, but also Judge Hazel's opinion in the American Graphophone case, affirmed by this Honorable Court of Appeals, which very clearly shows that the disc record, such as sold by the defendant after the injunction, was a most material and substantial part of the combination.

If, therefore, as shown by complainants' motion papers, the defendant sold these contempt records for use in connection with the complainant's reproducer of claim 35, it manifestly committed a contempt of Court in violating the injunction order, which was most clear and explicit.

RE DEFENDANT'S POINT NINE.

The defendant contends that the complainants presented no proof that the contempt records were *used* in a combination which infringed. (Defendant's Brief, p. 93).

It is respectfully submitted that the evidence that the defendant sold contempt records to Platz and to Thompson, and some to Bennett, with the knowledge that they were to be used in combination with complainant's reproducer, in accordance with the method of the patent, is sufficient, as hereinbefore particularly pointed out.

It is also respectfully submitted that the fact that complainant's reproducing device was the only reproducer in use, of which there were hundreds of thousands, with which the contempt records could be used for reproducing sound, as hereinbefore particularly pointed out, would also be sufficient.

It is respectfully submitted that there was no error in the Order of the Court below, finding the defendant in contempt, and that the said Order should be affirmed, with costs.

Respectfully submitted,

HORACE PETTIT,
Counsel for Defendants in Error.

March 28th, 1907.

Supreme Court of the United States. 1

LEEDS & CATLIN COMPANY, Petitioner, vs. VICTOR TALKING MACHINE COMPANY and UNITED STATES GRAMOPHONE COMPANY, Respondents.	OCTOBER TERM, 1906.

2

And now comes the petitioner above named and upon due notice to the Victor Talking Machine Company and the United States Gramophone Company, respondents above named, prays this Honorable Supreme Court of the United States that its writ issue to the United States Circuit Court of Appeals for the Second Circuit commanding the said Court to certify to this Court its records and proceedings in the above entitled suit, to the end that the said suit and *judgment finding petitioner in contempt* may be reviewed and determined by this Court.

Dated New York, May 4, 1907.

3

LOUIS HICKS,
Solicitor for Petitioner.

4 SUPREME COURT OF THE UNITED STATES.

LEEDS & CATLIN COMPANY, Petitioner, vs. VICTOR TALKING MACHINE COMPANY and UNITED STATES GRAMOPHONE COMPANY, Respondents.	OCTOBER TERM, 1906.

5 TO THE HONORABLE CHIEF JUSTICE AND ASSOCIATE JUSTICES OF THE SUPREME COURT OF THE UNITED STATES:

The petitioner above named respectfully shows:

This petition for writ of *certiorari* relates to the *contempt proceedings* heretofore had in the Circuit Court of the United States for the Southern District of New York and in the United States Circuit Court of Appeals for the Second Circuit in a patent suit in equity based upon Letters Patent of the United States, No. 534,543, of February 19, 1895, to Emile Berliner, between the respondents above named as complainants and the petitioner
6 above named as defendant. At the time of presentation of this petition, there is also presented to the Court another petition for writ of *certiorari* in order that this Court may review the said suit and the *decree for injunction* therein *upon the merits*. The *record in the contempt proceedings* includes the proceedings in the Circuit Court and in the Circuit Court of Appeals which led to the decree for injunction and the affirmance thereof, being the record in the suit upon the merits, as well as the subsequent proceedings in which defendant, the petitioner above named, was charged with a violation of the injunc-

tion, found guilty and by final judgment ordered to 7
pay a fine of one thousand dollars, one-half to respondents and one-half to the United States.

The judgment or decree of the Circuit Court finding defendant in contempt was affirmed by a divided court in the Circuit Court of Appeals, Hough, *D. J.*, with whom Coxe, *C. J.*, concurred, writing the opinion of the majority, and Wallace, *C. J.*, writing a dissenting opinion. THE QUESTION OF PATENT LAW INVOLVED IS ONE OF GREAT IMPORTANCE AND, AS JUDGE WALLACE STATES IN HIS DISSENTING OPINION, THE RULE OF INFRINGEMENT ADOPTED BY THE MAJORITY OPINION "NOT ONLY EXTENDS THE MONOPOLY OF THE PATENT TO AN UNPRECEDENTED EXTENT, BUT IS SUBVERSIVE OF THE 8
RIGHT OF A PURCHASER OF THE PATENTED THING TO REALIZE ITS FAIR MEASURE OF USEFULNESS BY MAKING NECESSARY REPARATIONS OR CHANGES BY WAY OF IMPROVEMENT." In view of the opinions written by Judges Hough and Wallace, and of petitioner's brief in the Circuit Court of Appeals, a copy whereof is hereto annexed and made a part of this petition, but a very brief statement of the facts and of the law involved will suffice to show that the question of law raised by the facts is of such *general application and importance*, that a review of the decision of the majority of the court under writ of *certiorari* by this Court is necessary, unless the law of infringement in patent suits, especially the law of 9
contributory infringement, is to become the subject of endless doubt, uncertainty and confusion.

Briefly stated, the question involved is this:

The petitioner manufactured and sold *disc sound-records*. The respondents manufactured and sold sound reproducing *machines combined* with such disc sound-records. The *combination* of the sound reproducing apparatus and the record was covered by claim 35 of the Berliner patent above mentioned owned by respondents. *The sound-record was an unpatented article which had existed and been used*

10 *in the prior art.* Respondents' sound reproducing machine was so constructed that it was *intended* that the record to be used thereon for the reproduction of sound could and should *frequently be replaced* and the sound-record was of such character that the destruction thereof was certain, within a very limited period of time, if the sound-record was used on the machine for the reproduction of sound. *The parts of the patented combination, other than the sound record,* that is *the sound reproducing machine, would last indefinitely for years.* Respondents sold the *patented combination,* consisting of the sound reproducing machine *and* the sound-record, to purchasers *without restric-*
11 *tion,* and, thereafter, *constantly,* sold new records to such purchasers to enable them to enjoy the machine and continue it in use. Petitioner sold sound-records to persons who had purchased from respondents the patented combination and the Circuit Court found that petitioner sold the sound-records to *such persons* with the intent that petitioner's sound-records should be used by such persons with the other parts of the patented combination, the sound-reproducing machine, which the respondents had sold to them, *combined with similar records.* In its essence, the important question of law involved is *whether a person who has purchased a patented combination from the patentee has the*
12 *right to replace an unpatented element of the combination and for such purpose to purchase such element from another than the patentee or his licensee.* The majority of the Circuit Court of Appeals has held that such replacement of the single unpatented element of the combination is *reconstruction* and not within the rights of the purchaser of the patented combination from the patentee. The error of this holding, it is respectfully submitted, clearly appears from the dissenting opinion of that very able and learned jurist, Judge Wallace, who wrote the opinion in the Morgan Envelope Company case in the Circuit Court (40 Fed., 577) with which

this Court agreed (152 U. S., 425). Judge Wallace's 13
opinion in the Morgan Envelope Company case is considered at page 50 of petitioner's annexed brief in the Circuit Court of Appeals, and the opinion of this Court in that case is considered at page 54 of petitioner's annexed brief. The decision of this Court in *Wilson* v. *Simpson*, 9 How., 109, is set forth at page 57, and of the Circuit Court of Appeals in *Goodyear Co.* v. *Jackson*, 112 Fed., 146, 150, at page 48, of petitioner's annexed brief. From these and other cases cited in the brief, it is clear that where an inventor so arranges the parts of his patented combination that the combination or machine cannot satisfactorily, successfully or usefully be continued in use, without the successive replace- 14
ment of one of the elements thereof, the replacement of such an element, if unpatented, by the purchaser of the combination from the patentee is *in accordance with the intention of the patentee and not a reconstruction* of the patented combination, but a repair or improvement within the rights of the purchaser. And this is so, as this Court held in *Wilson* v. *Simpson*, *supra*, even though the element replaced is "*an essential and distinct constituent of the principle or combination of the invention.*" In the Morgan Envelope Company case this Court held, affirming Judge Wallace, that the purchaser of the patented combination there involved had the right to 15
replace the paper of the patented combination so long as the fixture with which the paper was combined would endure, and that the replacement of the paper was not a reconstruction of the patented combination, but an act within the rights of the purchaser. In *Wilson* v. *Simpson*, this Court held that the replacement of the knives of a patented combination, constituting a planing machine, by the purchaser from the patentee was not a reconstruction, but the doing of an act which the purchaser had a right to do in order to enjoy the use of his purchased machine. In the Morgan Envelope Company

16 case this Court squarely held that to compel the purchaser of the patented combination to purchase the paper required for the use of the combination from the patentee would be to give to the patentee of the combination a monopoly of the unpatented paper.

The analogy between the unpatented paper of the patented combination of the Morgan Envelope Company case and the unpatented sound record of the patented combination of the case at bar and between the machines proper thereof, is very clearly stated by Judge Wallace in the first paragraph of his dissenting opinion. Judge Wallace, referring to the sound record, said:

17 "Its relation to the machine proper is analogous to that of the sheet of paper in a typewriting machine or the stalks of corn in a corn cutter. *It is the thing which is operated on by the machine proper.*"

Under Point Two, set forth at page 60 of petitioner's brief in the Circuit Court of Appeals, the decisions of this Court are cited, holding that where a patentee sells his patented article, the article passes *out of the monopoly of the patent* and ceases to be under the protection of the patent laws of the United States, and that a purchaser acquires the right to repair the purchased article or to improve upon it or to deal with it as he pleases without fur-
18 ther payment of royalty or tribute to the patentee. Under these decisions, the Circuit Court of Appeals for the Second Circuit, in *Thomson-Houston Co.* v. *Kelsey Co.*, 75 Fed., 1005, considered at pages 60-61 of petitioner's brief in the Circuit Court of Appeals, held that the purchaser of a patented combination had the right, immediately upon his purchase, to substitute for a single element of the combination, purchased from the patentee, a similar element purchased from another than the patentee; and that this right existed irrespective of the reason

why the purchaser desired to make the substitution. 19

The effect of the decision of the majority of the Circuit Court of Appeals is clearly to give to the respondents a monopoly of the manufacture, sale and use of an article which is unpatented and which was known and used in the prior art, and to deny to purchasers of the patented combination from respondents the right to secure the unpatented sound records for use therein, unless, after having paid the full royalty for the patented combination, they pay a further royalty to respondents in purchase of the unpatented records from respondents. Such a decision, Judge Wallace points out, overrules the decision of the same Court in the "trolley stand" 20 case (*Thomson-Houston Co.* v. *Kelsey Co.*, 75 Fed., 1005), wherein *the controlling decisions of this Court* were cited and followed, as shown under Point Two (p. 60) of petitioner's brief in the Circuit Court of Appeals. The important questions of law involved will so readily be appreciated by this Honorable Court from a reading of the opinions of Judges Hough and Wallace in the Circuit Court of Appeals, and from a mere inspection of petitioner's brief in the Circuit Court of Appeals, that it is deemed unnecessary to add anything further in support of this petition.

For the reasons stated, it is respectfully submitted that the petition for the writ of *certiorari* should be 21 granted.

Dated New York, May 4, 1907.

Louis Hicks,
Solicitor for Petitioner.
Office and Post Office address,
71 Nassau Street,
New York, N. Y.

22 State and County of New York, ss.:

EDWARD F. LEEDS, being duly sworn, says: That the Leeds & Catlin Company, the petitioner named in the foregoing petition, is a corporation organized and existing under the laws of the State of New York and that he is president thereof; that he has read the foregoing petition and knows the contents thereof, and that the same is true to his knowledge, except as to the matters therein stated to be alleged upon information and belief, and that as to those matters he believes it to be true.

EDWARD F. LEEDS.

Subscribed and sworn to
23 before me this 6th day
of May, 1907.

HARRY C. ADAMS,
Notary Public,
[NOTARY'S SEAL.] New York Co.

24

APPEAL PTG. CO., 14-16 Vesey St., N. Y.

Argued by
Louis Hicks.

United States Circuit Court of Appeals

FOR THE SECOND CIRCUIT.

LEEDS & CATLIN COMPANY,
Plaintiff-in-Error
(Defendant below),

vs.

THE VICTOR TALKING MACHINE COMPANY, *et al.*,
Defendants-in Error
(Complainants below).

BRIEF FOR PLAINTIFF-IN-ERROR.

Statement.

This cause comes here by writ of error to the Circuit Court for the Southern District of New York. The record consists of two parts, the *injunction record*, or record on appeal from the decree for preliminary injunction herein, and the *contempt record*, or record certified pursuant to the writ of error. By stipulation (contempt record, p. 122) the injunction record is part of the record certified pursuant to the writ of error. An order of this court to that effect has been entered pursuant to the stipulation.

The cause is a patent cause in equity. The patent in suit, No. 534,543 of Feb. 19, 1895, to Berliner for a Gramophone (inj. rec. p. 452) was sustained at final hearing by Judge Hazel in a prior suit (*Victor T. M. Co.* v. *Amer. Graphophone Co.*, 140 Fed. 860) and the decree was affirmed on appeal by this court, upon Judge Hazel's opinion, except as to question of prior use (145 Fed. 350). Thereupon a motion for preliminary injunction was made against this defendant and granted by Judge Townsend (146 Fed. 534). The preliminary injunction was stayed pending appeal (inj. rec. p. 330) and the decree for preliminary injunction was affirmed on appeal (148 Fed. 1022).

The Preliminary Injunction and Decree Therefor.

The preliminary injunction (con. rec. p. 14), which followed the decree therefor (inj. rec. p. 328), read as follows:

> "Now, therefore, we strictly command and enjoin you, the said Leeds & Catlin Company, and your associates, servants, clerks, agents and workmen, and each and every one of you, from *manufacturing*, *using*, or *selling*, until further order of this court, *sound reproducing apparatus or devices embodying the subject matter of claim 35* of the letters patent in suit, which claim reads as follows, namely:
>
> > '35. In a sound reproducing apparatus consisting of a travelling tablet having a sound record formed thereon and a reproducing stylus shaped for engagement with said record and free to be vibrated and propelled by the same, substantially as described.'
>
> and from *manufacturing*, *using* or *selling*, or in any way *disposing of apparatus or devices which embody the method specified in*

claim 5 of letters patent in suit, which claim reads as follows, namely:

> '5. The method of reproducing sounds from a record of the same which consists in vibrating a stylus and propelling the same along the record by and in accordance with the said record, substantially as described.'

and from using or employing in any way the method specified in said claim 5."

Upon the settlement of the above decree for preliminary injunction, complainants' counsel presented an order (con. rec. p. 106) containing a provision restraining defendant from "manufacturing, using or selling or in any way disposing of apparatus or devices" "*which is intended to be operated in accordance with said method claim 5.*" This order, however, was *not* signed by Judge Townsend (con. rec. p. 105, fol. 269) and such provision is not contained in the preliminary injunction or decree therefor.

The Infringement Found in the Prior Suit and on the Motion for Preliminary Injunction in This Suit.

In the prior suit, as stated by Judge Hazel (140 Fed. 860, 866), infringement was not controverted, nor was it controverted upon the motion for preliminary injunction in this suit. In both suits the validity of the patent was attacked. There was, therefore, no expression of opinion whatever by the Courts as to what constitutes an infringement of claims 5 and 35 of the patent suit. It is necessary, therefore, to refer to the records in order to ascertain what the proof of infringement was in each suit. The evidence shows (aff. Hicks, con. rec. p. 101), that in the prior suit of these complainants against the American Grapho-

phone Company (140 Fed. 860, affirmed 145 Fed. 350);—

> "The proof of infringement by the American Graphophone Company in that suit rested upon the following stipulation, which is to be found at page 15 of the record on appeal in that suit:
>
> > 'It is stipulated between counsel that the foregoing exhibits marked respectively 'Complaints' Exhibit, Defendant's Machine,' and 'Complainants' Exhibit, Defendant's Sound Record' were made by the defendant and sold within the Southern District of New York subsequent to the date of the patent in suit and prior to suit brought and that the said record exhibit was made for use upon the said machine exhibit and was so used.'
>
> "There was no other proof of infringement, and the proof of infringement in that suit, therefore, is confined to the manufacture, sale and use by the American Graphophone Company of the invention of claims 5 and 35 of the patent in suit as embodied in the said exhibits."

Referring to the proof of infringement in the prior suit, Mr. Leeds, in his affidavit, says (con. rec. p. 51);—

> "In the prior suit against the American Graphophone Company, as appears from the record in said suit, the infringement charged was based upon a stipulation between counsel for complainants and defendants in that suit that defendant had made and sold a machine and a sound record which were offered in evidence, and that the said record exhibit was made for use upon the said machine and was so used. The proof, therefore, was under the stipulation that the defendant in that suit made, sold and used all the elements covered by claims 5 and 35 of the patent in suit and infringement was accordingly found. The right to make and sell sound records independently

> of the machines was in no way litigated in the prior suit, and was not passed upon by the courts in the prior suit."

Referring to the proof of infringement upon the motion for preliminary injunction in this suit, Mr. Leeds, in his affidavit, says (con. rec. p. 51):—

> "Upon the motion for preliminary injunction in this suit, the infringement alleged was that defendant had sold a sound reproducing machine, known as the Ohio Talk-o-phone, together with disc sound records. The sound reproducing machine, or Talk-o-phone, was a machine not manufactured or sold by complainants or their licensees, and the combination of said machine and said sound records sold by defendant was held to be an infringement of claims 5 and 35 of the patent in suit, said holding being based upon the finding in the prior suit. The preliminary injunction and the decree, therefore, in this suit enjoins defendant from making, using or selling sound reproducing apparatus or devices embodying the subject matter of claims 5 and 35 of the patent in suit, and from using or employing in any way the method specified in said claim 5."

Upon the question of infringement in the prior suit and in this suit, the evidence further shows (aff. Hicks, con. rec. p. 102):—

> "Upon the motion for preliminary injunction in this suit, the sole proof of infringement consisted in affidavits alleging that defendant sold a machine known as the Ohio, Talk-O Phone, together with sound records for use thereon. Defendant admitted that in the settlement of an account with the Talk-O-Phone Company it had taken in part payment a few Talk-o-phones. Hence, in the prior suit, the question of infringement was confined to the making, using and selling by defendant of machines and sound records for use thereon, and in this suit the question of

> infringement was confined to the selling by defendant of machines not licensed by complainants, together with sound records, for use thereon. In each case the machines combined with the records embodied the invention of claims 5 and 35 of the patent in suit, and did not operate by the aid of mechanical feed-devices of the prior art. The questions which complainants seek to raise upon this motion were not adjudicated by the Courts, either in the prior suit or in this suit."

It is clear, therefore that in the prior suit and in this suit the question here involved was in no way litigated or passed upon; that the finding of infringement, which was not controverted in either suit, rested upon proof of the making, using and selling of sound reproducing apparatus, containing *all* of the elements of claim 35 and operating according to the method of claim 5, which machine and record had not been made or sold or licensed by complainants or their licensees.

The attempt of complainants to misstate the scope of the decision in the prior suit met with the most severe condemnation by Judge Hazel (145 Fed. 188). In the prior suit, immediately after the entry of Judge Hazel's final decree, complainants sent a misleading circular to the trade dated October 28, 1905. In that circular it was stated that Judge Hazel's decision placed the Victor Company "in control of the disc situation," and, in addition, complainants said in the circular,

> "but all dealers who continue to handle infringing machines and records we shall unquestionably hold liable."

Thereupon the American Graphophone Company moved before Judge Hazel to compel complainants to recall the circular, and Mr. Lyle in his affidavit in support of the motion, said;—

> "In the second place, since the suit relates

> to disc talking machines and *not to disc records*, since all goods are licensed in any event, and since the operation of the decree has been suspended by order of the court—we should not be called upon to rectify the want or injury."

The opposing affidavit of Mr. Douglas of the Victor Company made no denial of the statement that the suit related to disc talking machines and *not to disc records*. Judge Hazel, though denying the motion to compel the complainant to recall its original circular or give the relief sought, because doubtful upon the question of jurisdiction, said (145 Fed. 188):—

> "*The asserted good faith of the complainant is not entirely beyond question.* * * * This is shown by its omission to state in the circular that *the defendant had the legal right to sell the records*, and by its precipitancy in publishing or advertising the decision of the Court. * * * The circular may not have been false or fraudulent, and counsel's interpretation of the opinion may not be inaccurate; but knowing that the case would be reviewed on appeal. * * *"

That case was No. 8627 in the Circuit Court and the papers filed therein show the foregoing facts. The complainants' circular was artfully worded, and its good faith was not beyond question. "*The defendant had the legal right to sell the records.*" In their circular complainants spoke of "infringing machines and records" which Judge Hazel said may not have been a false and fraudulent statement, and may not have been inaccurate. Clearly, in Judge Hazel's opinion, the statement was misleading and the bad faith of complainants apparent. The decision sustaining the patent upheld the combination only of the record with the reproducing machine. This was the extent of the adjudications by the courts upon the ques-

tions first presented for decision upon the motion to punish this defendant for contempt.

In an attempt to explain away the clear intimation made by Judge Hazel (145 Fed. 188), that complainants' misleading circular with reference to Judge Hazel's decision in the prior suit on the patent here involved, not only indicated the bad faith of complainants, but was also false and fraudulent, complainants' counsel in his reply brief in the court below argued that when Judge Hazel said that "*the defendant had the legal right to sell the records*" he made the statement inadvertently and meant to say machines and records, notwithstanding the affirmative contention of the American Graphophone Company made in Mr. Lyle's affidavit that the suit was one relating "to disc talking machines and not to disc records." Whatever else may be said in regard to Judge Hazel's opinion upon the motion based upon complainants' misleading circular, *this fact is clear*; that Judge Hazel did *not* say that the making and selling of records was *not* the legal right of the defendant or was within the scope of the injunction granted in the case. It took one hundred and twenty-five pages or more of argument on the part of complainants' counsel in the Court below to attempt to show that defendant has not the right to sell sound records. This fact is in itself convincing proof that no court had ever held that defendant had not the right to sell sound-records for use "in machines (other than 'mechanical feed' machines) *sold by complainants or their licensees, combined with such records*" (con. rec. p. 113, fol. 299), the act, and the *only* act, for which defendant was held to have violated the injunction.

The Vital Element of the Claims, 5 and 35, in Suit.

Claim 35 covers the *sound reproducing apparatus*, shown in Fig. 3 of the patent in suit (inj. rec. p. 454) or in Fig. 10 of Berliner's patent No. 564,586 (inj. rec. p. 465). Claim 5 covers the *method* by which sounds are reproduced from a sound-record by means of such an apparatus. The *vital element* of the invention resides in the *universal joint* 87 or *swinging arm* 88 (Fig. 3, inj. rec. p. 454) or similar device (Fig. 10, inj. rec. p. 465) whereby the stylus is "free to be *propelled*" by the record. The sound record, mentioned in the claims, existed before the date of the invention of the patent in suit, as hereinafter shown, and had been used for the reproduction of sound by means of "*mechanical feed*" sound reproducing apparatus, wherein the stylus was *not* "free to be *propelled*" by the *record*, but was positively propelled across the face of the record by a *feed-screw*. This appears clearly from Fig. 8 of Berliner's prior English patent No. 15,232 of Nov. 8, 1887 (inj. rec. p. 526); also from Fig. 1 of Berliner's corresponding home patent, No. 564,586 of July 28, 1896 (inj. rec. p. 463) which expired Nov. 8, 1904, with the said prior British patent. The illustration, Fig. 1, of the article in the Electrical World for Nov. 12, 1887 (inj. rec. p. 243), shows the same disc sound record with lateral undulations of even depth, illustrated also in Fig. 2 thereof, employed for the reproduction of sound by means of the "mechanical feed" or feed-screw machine; while the illustration of the article on "The Improved Berliner Gramophone" in the Electrical World for Aug. 18, 1888 (inj. rec. p. 274), shows the same sound record used for reproduction of sound upon a machine embodying the invention of the patent in suit, in which the stylus,

by means of the swinging arm, is *free to* be propelled across the face of the record by the record and is not positively moved across the record by a mechanical feed-device or feed-screw, of the prior art.

Expired Berliner home patents, No. 372,786 of Nov. 8, 1887, applied for May 4, 1887 (inj. rec. p. 416) and No. 382,790 of May 15, 1888 (inj rec. p. 434), decribe and claim the making of cylindrical and disc sound records having lateral undulations of even depth and Fig. 1 of the former shows the use of such sound records upon a "mechanical feed" machine. The expired, prior, Berliner, English patent No. 15,232 of Nov. 8, 1887 claims the sound-record of lateral undulations and even depth as a product (inj. rec. p. 525, claim 15) and Figs. 1 and 8 thereof show such records in the form of a cylinder and a disc employed for the reproduction of sound by the aid of a stylus mechanically fed, by a feed-screw, across the face of the record; the corresponding, expired, Berliner, German patent, No. 45,048 of Nov. 8, 1887 (inj. rec. p. 132) shows the same.

The essence of the invention, the vital element, of the claims 5 and 35 in suit, resides, therefore, in the mounting of the stylus so that it is free to be propelled by the record; it does *not* reside in the record. As was said by this Court upon the oral argument of the appeal in the prior suit, *the invention consisted in discarding the feed-screw of the prior art.*

Thus before Berliner made the invention of the patent in suit, by discarding the feed-screw of the prior art, he employed "mechanical feed" or feed-screw machines to reproduce sounds from *disc sound records of lateral undulations and uniform depth.* The operation of such feed-screw machines of the prior art, in reproducing sounds from such disc records, was in every respect *identical* with

the operation of the machines of the patent in suit, *except* that in the one case the feed-screw propelled the stylus across the record or the record over the point of the stylus, while in the other the stylus was free to be propelled and was propelled by the record groove across the record. In each case the stylus vibrated laterally, in accordance with the lateral undulations of the record groove and in each case *the disc sound record, of lateral undulations and uniform depth, was the same.* But long before Berliner employed his feed-device gramophone of the prior art, the Edison phonograph (inj. rec. p. 484, Figs. 1 and 2; p. 336, par. 4; p. 346, Fig. 1) and the Bell and Tainter graphophone (inj. rec., p. 387, Fig. 1, etc.; p. 443, lines 7-15) of the prior art also employed feed-screws to propel the stylus over, and to reproduce sound from, disc records. Hence Judge Hazel, with whom this court agreed, distinguished the principle of the Berliner machines of the claims, 5 and 35, in suit, from the Bell & Tainter graphophone as follows (140 Fed. 863):

> "The principle of operation in the Berliner machine is thought to be essentially different from that of the machine of Bell & Tainter. In the latter an auxiliary joint or feed screw was necessary, as already stated, to effectuate the required passage of the record over the point of the stylus, or to cause the stylus and reproducer diaphragm to travel across the surface of the record. In complainants' patent, on the other hand, it is shown that the lateral vibrations of the stylus point, and the propelling of the same over the surface of the record without mechanical assistance, and through the means of the groove alone, was the primary object of the inventor."

Judge Hazel also said (140 Fed. 861);—

> "At the date of the invention in suit it was not new to record sound and articulated words and *reproduce the same by suitable mechanical means*."

The Decree for Contempt.

The decree for contempt (con. rec. p. 112), from which the cause is brought to this court by writ of error, found that defendant company

> "has violated said order and writ of injunction of this Court, in that defendant, after said order and writ of injunction, sold the *records* of claim 35 of the patent in suit, No. 534,543 of February 19, 1895, to Berliner, with the intent that said records should be used in combination with the other elements of that claim in *machines* (other than 'mechanical feed' machines), *sold by complainants or their licensees, combined with such records*, for use in carrying out the method of claim 5."

A fine of $1,000, payable one-half to the United States and one-half to complainants, was by the decree imposed upon the defendant company. An order staying the collection of the fine pending this appeal was entered on the same day (con. rec. p. 114). Furthermore, an order partially staying the preliminary injunction and decree therefor was also entered on the same day (con. rec. p. 115),

> "in so far as the same have been construed by this Court on the motion for contempt to enjoin and restrain defendant from selling disc sound *records* for use in the United States upon *machines sold by complainants and their licensees, together with disc sound records*."

The opinion of Judge Lacombe upon the motion for contempt is to be found at page 110 of the contempt record. From the order staying the collec-

tion of the fine and from the order partially staying the preliminary injunction and decree therefor, pending this appeal, by writ of error, it appears that Judge Lacombe entertained considerable doubt upon the question of law raised. From the order partially staying the preliminary injunction and decree therefor, it conclusively appears that in the opinion of Judge Lacombe the question raised upon the motion for contempt had not been passed upon by Judge Townsend when the decree for preliminary injunction was entered, or by the Circuit Court of Appeals when that decree was affirmed, and had not been passed upon either by Judge Hazel or the Circuit Court of Appeals in the prior suit of these complainants against the American Graphophone Company, wherein the patent in suit was sustained at final hearing and infringement found. It will not be disputed by complainants' counsel that upon the settlement of the orders referred to, Judge Lacombe stated that seven judges out of ten would have denied complainants' motion for contempt; that the question presented was a pure question of law, and that under the authorities great doubt existed upon the question of law, and that complainants were extremely fortunate in securing the decree for contempt, instead of being obliged to raise the question by appropriate proceedings other than a motion to punish for contempt.

It will be seen from the part above quoted from the decree for contempt that the violation of the order and writ of injunction found by the court, rests, first, upon the alleged "intent" with which the records were sold; and second, upon the intended use of the said records, namely, the intended use thereof in combination with the other elements of claim 35 in machines (other than "mechanical feed" machines *sold by complainants or their licensees combined with such records.*

There is no finding that the records sold by defendant company were ever used upon any machine of any kind for the reproduction of sound therefrom; and there is no evidence whatever to show that the records alleged to have been sold by defendant company in violation of the injunction were ever used upon any machine of any kind for the reproduction of sound therefrom. The important point, however, is that the finding of contempt rests exclusively upon the sale by defendant company of records with the intent that such records should be used upon *machines* (other than "mechanical feed" machines) *sold by complainants or their licensees combined with such records*. In other words, the finding is that complainants and their licensees had sold the *complete combination* of claim 35, including the record, for use in carrying out the method of claim 5, and that defendant company had sold records to such purchasers of the complete combination from the complainants and their licensees, with the intent that the purchaser, who had paid the consideration or royalty to complainants or their licensees for the complete combination and who had thereby obtained title to the complete combination released from the monopoly of the patent and the laws of the United States, should use the records purchased from defendant company to replace the records previously purchased as part of the complete combination from complainants and their licensees. There is no finding that such purchasers of the complete combination from complainants and their licensees and of records from defendant company intended to use, or ever did use, the records purchased from defendant company for *an unlawful purpose*, unless the mere fact of the purchase of the record from defendant company for use in replacing the record in the complete combination purchased

from complainants and their licensees is in itself an unlawful act, no matter what may have been the cause of the purchase. The logical and clear effect of the finding of the Circuit Court is that a purchaser of the complete combination of claim 35 of the patent in suit, sold by complainants and their licensees for use in carrying out the method of claim 5, commits an unlawful act and infringes those claims of the patent.

(a) If the record of the combination purchased from complainants and their licensees is *broken* and the purchaser obtains, from another than complainants or their licensees, a new record in order *to restore the combination*.

(b) If the record is *old or worn out by use* and the purchaser obtains, from another than complainants or their licensees, a new record in order *to restore the combination*.

(c) If the purchaser of the complete combination from complainants or their licensees desires *to improve upon* the combination so purchased, and for such purpose obtains, from another than complainants and their licensees, a new record *to replace the record* purchased as part of the complete combination from complainants or their licensees.

(d) If the purchaser of the complete combination from complainants or their licensees desires *to substitute a new record* for the record forming part of the complete combination purchased from complainants or their licensees, and for such purpose obtains a new record from another than complainants or their licensees.

(e) If a purchaser of the complete combination from complainants or their licensees desires *to have on hand new records in order to restore the combination* purchased from complainants or their licensees, when the record

thereof has become *broken, old, worn out by use or for other reason unsatisfactory or useless*, and for such purpose purchases a new record from another than complainants or their licensees.

(f) If the purchaser of the complete combination from complainants or their licensees desires not to re-construct the patented combination but *to deal with it in the same manner as if dealing with property of any other kind, for the purpose of repairing it or improving upon it*, and for such purpose obtains from another than complainants or their licensees a new record to replace the record of the combination purchased from complainants or their licensees.

The sound record is a perishable, temporary part of the combination forming the sound reproducing apparatus of the patent in suit and it is intended that the sound record shall frequently be replaced. The rest of the apparatus, except some forms of needles, is permanent in its nature and will last indefinitely for years.

It will be seen that the above statement is established by the evidence beyond the possibility of doubt or dispute. Indeed, a mere inspection of the sound reproducing apparatus and a consideration of the wear upon the record when the apparatus is used for the reproduction of sound, would alone be sufficient to establish this point. However, the testimony of the experts, not only of defendant, but also of complainants, shows that the point is undisputed. Judge Lacombe, in his opinion on the motion for contempt, found that new records are frequently bought "as substitutes for worn out discs" (con. rec. p. 111, fol. 294); but he held that because new records are "bought

more frequently in order to increase the repertory of tunes than as substitutes for worn out discs," the substitution of new records "in machines (other than 'mechanical feed' machines) sold by complainants or their licensees combined with such records, for use in carrying out the method of claim 5," was not in any legitimate sense "repairs" (con. rec. p. 111, fol. 224). In this the learned Circuit Judge clearly erred. He conceded that the new records were frequently purchased as substitutes for worn out discs. The right to substitute a new record for a worn out record is a matter so clear, as a proposition of law, that argument is unnecessary, under the authorities, to establish it. This being true, the fundamental principle of defendant's contention is established; namely, the right of a purchaser of "machines (other than 'mechanical feed' machines) sold by complainants or their licensees *combined with such records*, for use in carrying out the method of claim 5", to substitute a new record, purchased from another than complainants or their licensees, for the record purchased as part of the combination from complainants or their licensees, when the record purchased from complainants or their licensees has become broken, worn out by use or unsatisfactory or useless through any other cause. If the purchaser has the right, and it must be conceded that he has, to substitute a new record for the record originally purchased as part of the combination from complainants or their licensees, what difference does it make whether he purchases a hundred records or only one to make the substitution? What principle of law can be evolved from the finding of the learned Circuit Judge that new records are bought more frequently in order to increase the repertory of tunes than as substitutes for worn out discs, other than the untenable and

erroneous principle that complainants are entitled to a monopoly of the unpatented disc sound record? It is not intended at this point, to enter upon any full discussion of the law, and, as will hereinafter be shown, according to the well settled law, the rights of a purchaser of a patented combination exceed those above indicated. We are now dealing with the facts to which the principles of law must be applied, and in order that the court may be cognizant of the important facts, that the sound record is merely a temporary and perishable element of the patented combination and that it is intended that the sound record shall frequently be replaced, while the other elements of the combination, constituting with the sound record the sound reproducing apparatus, will last infinitely for years, the following quotations from the evidence are made.

Mr. Edwards F. Leeds, one of the foremost record makers of this country, who has been engaged in the making of sound records from the time of the North American Phonograph Company which was organized in 1888 to exploit the fundamental inventions of the art of Mr. Edison and Bell & Tainter (inj. rec. p. 115, fols. 345-346) says (con. rec. pp. 62-64):—

> "I have been engaged in the manufacture of sound records of the disc and cylinder type having lateral and vertical undulations for the past fifteen years. I have, therefore, acquired a large experience and knowledge of talking machines and sound-records used therewith. The sound-record is not a part of the sound reproducing apparatus or machine which is permanent; it is essentially a temporary part, perishable in its nature and intended frequently to be replaced. The rest of the machine, except some forms of needles, is permanent in its nature and will last indefinitely for years, but the record may last

for but a few minutes or a few days, depending upon the material of which it is composed and the number of times that it is used for the reproduction of sound therefrom. The needle used for contact with the sound-record in the production of sound is usually made of steel and has a sharp point. This needle fits into the record groove, and is vibrated and propelled by the record-groove. The result is that the needle wears upon the record and it is intended and it is essential for the enjoyment and use of the machine that the record shall constantly be renewed. Complainants sell their machine embodying the invention of claims 5 and 35 of the patent in suit at prices ranging, according to their statement of June 1, 1906, from $17 to $100 each; while they sell their records, according to the same statement, at prices ranging from 35 cents to $5 each. If the purchaser had not the right to replace the temporary part, the record, which it is intended he shall replace, he would pay from $17 to $100 for a machine which would reproduce for him but a single record for which he may have paid only 35 cents. Therefore, as shown in the moving papers, it has been the custom of complainants and their licensees to sell sound-records in order to replace the sound records sold with the machine and worn out or destroyed by use or accident. The machines are so constructed that the record can be placed upon it or removed therefrom simply by placing the record upon or taking the record off the flat disc turn-table.

From tests which I have made and which have been made by others within my knowledge, as well as from my large experience in manufacture, I know that disc sound-records having lateral undulations such as defendant's and complainants' sound-records intended for use upon complainants' machines embodying claims 5 and 35 of the patent in suit can be used for the reproduction of sound but a very limited number of times. Unless the material of which the tablet is composed

is unusually perfect the record cannot be successfully played more than twenty-five or thirty times before it has to be renewed. Often a single reproduction or two or three reproductions will destroy the record because of the quality of the material or because of the conditions under which the needle acts when following the record-groove. Frequently a record becomes useless after being played for ten or twelve times. In exceptional cases a record can be played more than thirty times and as often as fifty or sixty times. It takes but a minute or two to play a record, and the same record can be played many times within one-half hour, a sufficient number of times to destroy it, wear it out and render it useless. The records, moreover, are fragile in their nature and are often broken in transportation, or by falling or other cause. Inexperienced users frequently scratch the record across the spiral lines and otherwise, through lack of proper adjustment of the needle to the record-groove, and in this manner and in other ways the records are destroyed in large quantities. Another reason why the record is intended to be but a temporary part of the machine is that after the record has been played several times it becomes tiresome.

After a single playing of the record the deterioration of the record appears. Complainants' records, after a few playings, become gray in appearance along the record-groove, showing that the friction of the needle has chipped off the edges, cut into the smooth finish of the surface, and otherwise worn out the material. The deterioration rapidly increases the oftener the record is played, until soon the record is useless. Records made by complainants' licensees, the American Graphophone Company, ordinarily cannot successfully be reproduced more than twelve or fifteen times, and the same is true of similar records made by the American Record Company. Hence, one of the problems in the record-making art is to secure a material so

perfect that it will withstand the friction of the needle a greater number of times. At the present time and heretofore sound records such as those in suit have been made by different manufacturers, including complainants and defendant, and complainants' licensees and others mentioned, of substantially the same material, all having the qualities and defects above specified by reason of which and for the other reasons stated the record is essentially a very temporary part of the machine and is intended constantly to be replaced?"

Mr. Bunker, who has for several years been actively engaged in the talking machine business as a dealer and salesman, says (con. rec. pp. 89-90):—

> "The record is a temporary part of all sound-reproducing machines, and this is especially true of sound reproducing machines intended for the reproduction of sound from flat disc records having lateral undulations. Such machines employ a sharp steel needle which fits into the record-groove and soon wears out and destroys the record. A very few reproductions of sound from a record will in many cases render the record useless. Often from ten to fifteen reproductions will wear out and destroy the record. Ordinarily a record can be played for about twenty-five to thirty times, and in some cases, if the material of which the record is made is of exceptional character, the record can be played a greater number of times, but the record begins to wear out with the first playing thereof; hence such machines are so constructed that the records can constantly be replaced, and it is the practice to replace the record after one or two playings."

Mr. Leo Moeller, who has for the past five years been engaged in the manufacture of disc and other sound records, says (con. rec. pp. 98-99):—

> "Flat disc sound-records having lateral undulations are a very temporary part of a sound reproducing machine. All sound reproducing

machines employing such records are designed and constructed so that the record may conveniently and frequently be removed and replaced. A machine constructed so that the record could not conveniently be removed and replaced would be of no value whatever, since after the record had been played a few times it would be worn out and destroyed and the machine would then become useless. The lasting qualities of flat disc-sound-records having lateral undulations depend upon the material of which the tablet is composed and upon the perfection of manufacture of the record. All such records are made substantially to-day of the same material. The first time that the reproducing stylus passes over the record-groove, the record begins to wear out. The stylus is a a sharp steel needle, and it cuts into and wears down the edges of the surface of the record. Not infrequently a record is destroyed the first time that it is played. Ordinarily a record may be played for about thirty times. Often from ten to fifteen reproductions will destroy a record, while sometimes, if the record is an exceptional one, it may be successfully played as often as fifty or sixty times. However, an inexperienced user of a machine may scratch the record even before playing and thus destroy the record, and often the records are broken and thus become useless."

The foregoing testimony of defendant's experts finds confirmation not only in the finding of the court above referred to, but also in the affidavits of complainants' experts.

Mr. Middleton, secretary of the Victor Talking Machine Company, says (con. rec. p. 37):

"A large portion of the revenue of the complainant company is derived from the sale of its disc records. A purchaser of a machine or reproducing apparatus, for use in reproducing from the record, frequently expends very much less for the machine than he does for his collection of records, as *records are*

being constantly purchased by the purchaser of a machine from time to time; $25 frequently represents the purchase of a machine, while the owner of that machine, in a short space of time, will expend at least as much as $100 for records."

Mr. Haddon, treasurer of the Victor Talking Machine Company, says (con. rec. p. 40):—

> "A large portion of the Victor Company's business has been, and is, in the manufacture and sale of disc records, for use in connection with the reproducing apparatus which it makes and sells, and a large proportion of its profit is derived therefrom. When it sells a reproducing apparatus to a purchaser, which is part of the combination of claim 35, it is to be used in combination with the other element of the claim, sold by the complainants, the traveling tablet or record, which it also sells to the purchaser at a separate price, distinct from the price of the reproducing element."

In a further affidavit Mr. Middleton, secretary of the Victor Company, states, that for several years past he has had a great deal of experience in the testing of disc records having a laterally undulating groove of even depth, and that he has many times made special tests to ascertain the quality and durability of the records (con. rec. p. 45, fol. 134). Mr. Middleton then says (con. rec. p. 45):

> "I often take a record out of our stock as a sample record, and spend practically a whole afternoon and evening continuously testing it on one of our reproducing machines, playing the selection over and over again to ascertain whether the material of the record disc is kept up to our standard, besides other numerous and frequent tests which I make with different records at different times for like purposes. I have been doing this at frequent intervals for three or four years."

Referring to the statement of defendants' expert, Mr. Moeller, "that the stylus is a sharp needle and cuts into and wears down the edges of the surface of the record," Mr. Middleton says (con. rec. p. 46):—

> "The point of a properly formed needle for this purpose, such as sold by complainants, is specially ground and shaped so as not to cut the record."

Although Mr. Middleton booms complainants' records and claims for them a durability greater than that of the records of any of the competitors of the complainant companies, it is clear that the essential proposition, namely, that the sound record is a perishable and temporary element of the combination forming the sound reproducing apparatus of claim 35, and that it is intended that the record shall frequently be replaced is established. By a stretch of conscience or of imagination Mr. Middleton claims that complainants' superior records can be played two hundred fifty to three hundred times. "Infringing records", however, he says, can be played fifty or sixty times (con. rec. p. 46). As pointed out by Mr. Leeds, the records made by complainants' licensees, the American Graphophone Company, ordinarily cannot successfully be reproduced more than twelve or fifteen times. This Mr. Middleton does not deny. The fact that Mr. Middleton has for several years been engaged night and day in the testing of complainants' records to keep them up to the standard of durability; the fact that the points of the needles sold by complainents are specially ground and shaped so as to prevent the needle, as far as possible, from cutting the record, and the admission that complainants' records soon reach their limit of durability, even though they may be played oftener

than infringing records can be played, must convince the court of the truth of the self-evident fact that the disc sound record is a most delicate, temporary and perishable part of the combination of claim 35 of the patent in suit. It takes but a minute or two to play a sound-record, and, as Mr. Leeds points out, the same record can be played many times within one-half hour, a sufficient number of times to destroy it, wear it out and render it useless. Inexperienced users frequently scratch the record across the spiral lines or otherwise break or destroy the record before playing. The life of the record is therefore a matter of a few hours, as must be the case when the same record is frequently played in the penny-in-the-slot machine; or a matter of a few days or weeks or months, depending entirely upon the number of times that it is used. If it is used, it will with certainty be worn out and destroyed within a very short period of time. The machine is, therefore, so constructed that the records can easily be placed upon it or removed from it. The rest of the apparatus, except some forms of needles, will last indefinitely for years. It is difficult to imagine a more temporary or perishable part of a patented combination than is the sound-record of the combination of claim 35. The sound-record is obviously essentially like the toilet paper of the Morgan Envelope Company case. When Judge Lacombe said that the sound-record is wholly unlike the toilet paper in the Morgan Envelope Company case (con. rec. p. 111), it is clear that he erred, because he said that the toilet paper "was destroyed by a single use." Clearly the toilet paper which formed a part of the combination of the patent in the Morgan Envelope Company case was capable of a greater number of uses than is the sound-record. The toilet paper is used from time to time until the bundle has been consumed; so the sound-record is played

from time to time until the sound-record has been destroyed. Both are like the cutting knives of the planing machine case. The cutting knives would last from sixty to ninety days. Each time the knives were used they became less perfect, until at the end of the sixty or ninety days they were destroyed, just as the sound-record is destroyed after it has been played the requisite number of times, usually from fifteen to sixty times.

Complainants and their licensees sold the combination of claim 35, the sound reproducing apparatus, including the sound record thereof, to purchasers, without any restriction whatever.

The finding of the Circuit Court that defendants violated the preliminary injunction is limited, as above shown, to the sale of records by defendant to persons who had purchased "machines (other than 'mechanical feed' machines) sold by complainants or their licensees *combined with such records*, for use in carrying out the method of claim 5." The undisputed evidence is that complainants and their licensees sold the said machines, combined with such records, that is sold the sound-reproducing apparatus forming the complete combination of claim 35, to purchasers thereof, without any restriction whatever.

Referring to the moving affidavits, especially those of Middleton and Haddon, secretary and treasurer of the Victor Talking Machine Company, one of the complainants herein, it appears that they each make the following allegation (con. rec. pp. 35-36, 40);—

> "There are to-day, in use in the United States, many hundreds of thousands of reproducing apparatus of this construction, de-

> signed to be operated in this manner for reproducing sound from disc records similar to the said records manufactured by the defendant."

The reproducing apparatus referred to in the said affidavits are machines constructed according to claims 5 and 35 of the patent in suit by complainants and their licensees and sold, combined with records, to hundreds of thousands of purchasers throughout the United States. Mr. Middleton in his affidavit further says (con. rec. p. 37):—

> "A large portion of the revenue of the complainant company is derived from the sale of its disc records. A purchaser of a machine or reproducing apparatus, for use in reproducing from the record, frequently expends very much less for the machine than he does for his collection of records, as records are being constantly purchased by the purchaser of a machine from time to time; $25 frequently represents the purchase of a machine, while the owner of that machine, in a short space of time, would expend at least as much as $100 for records.

Mr. Haddon in his affidavit also says (con. rec. p. 40):—

> "A large portion of the Victor Company's business has been, and is, in the manufacture and sale of disc records, for use in connection with the reproducing apparatus which it makes and sells, and a large portion of its profit is derived therefrom. When it sells a reproducing apparatus to a purchaser which is part of the combination of claim 35, it is to be used in combination with the other element of the claim sold by the complainants, the traveling tablet or record * * *"

There is not a word in any of complainants' affidavits to the effect that complainants or their

licensees ever sold their machines and records with any restriction upon the right of the purchaser to replace the perishable, temporary part of the combination, namely, the record, when worn out, broken or otherwise rendered useless, by records either of his own manufacture or purchased from manufacturers other than complainants or their licensees. On the other hand, it appears from defendant's affidavits that complainants and their licensees, the American Graphophone Company and the Universal Talking Machine Company, have sold within the United States, hundreds of thousands of machines and records forming the combinations of claims 5 and 35 in suit without any such restriction. It further appears from defendants' affidavits that purchasers of such machines and records from complainants or their licensees have been accustomed to replace the records sold by complainants by records sold by one of their licensees; and that purchasers of such machines and records from one of the licensees have been accustomed to replace the records by complainants' records; and that all purchasers have been accustomed to replace said records purchased with said machines by records not made or sold by complainants or their licensees, and have at all times, from the beginning down to the present day, understood that such was their right, and no intimation of any restriction to the contrary has ever been given by complainants or their licensees (con. rec., affs., E. F. Leeds, pp. 60-62, fols. 180-184; L. H. Bunker, p. 90, fols. 229-230; L. Moeller, p. 99, fols. 257-259).

Defendant Company's Disc Sound Records are unpatented articles of commerce of the Prior Art.

Complainants attempt by these proceedings for contempt to secure a monopoly of the *unpatented*

sound-record of the prior art, which is nowhere claimed in the patent in suit, except as a perishable and temporary part of the combination of claim 35. This combination, the sound reproducing apparatus of claim 35, illustrated in Fig. 3 of the patent in suit (inj. rec. p. 454), complainants and their licensees have sold to the public without restriction (con. rec. p. 61, fol. 182; p. 90, fol. 229; p. 99, fol. 258), thereby releasing the *combination* from the monopoly of the patent.

Defendant's sound records, here in question, were disc sound records of lateral undulations and even depth. Such sound records belong to the prior art and were described and patented by Berliner, the patentee of the patent in suit, in the United States and foreign countries, before the issue of the patent in suit, by numerous patents which have all expired. This appears from U. S. patents No. 372,786, of Nov. 8, 1887, applied for May 4, 1887 (inj. rec. p. 416) and No. 382,790, of May 15, 1888 (inj. rec. p. 434); English patents No. 15232 of Nov. 8, 1887 (inj. rec. p. 516, Figs 1 and 8 and claim 15, p. 525) and No. 7204 of May 15, 1888 (inj. rec. p. 528); German patents No. 45048, of Nov. 8, 1887 (inj. rec. p. 132, claims 1-5, pp. 142-145) and No. 45,079 of May 16, 1888 (inj. rec. p. 145); and from various other patents.

Berliner, moreover, described and illustrated such disc sound records and the use thereof upon "mechanical feed" machines of the prior art, not only in the patents above mentioned but also in the Electrical World for Nov. 12, 1887 (inj. rec. p. 243).

Edison, in English patent No. 1644 of 1878, disclosed, at the time of invention of *all* sound recording and reproducing machines, disc sound records of the zigzag type, that is with lateral undulations of even depth (inj. rec. p. 473, lines 53-57), and the use thereof upon sound-reproducing machines.

which as shown in Figs. 1 and 2 (inj. rec. p. 484) might be feed-device machines or as shown in Fig. 34 (inj. rec. p. 486) might be machines in which the feed-device was dispensed with and the stylus propelled across the record by the groove of the record (inj. rec. p. 479, lines 48-53, claim 1, p. 482).

Bell & Tainter, in U. S. patent No. 341,214 of May 4, 1886, at the time of the invention of the graphophone, disclosed, before Berliner had applied for any of his talking machine patents, disc sound records and the use thereof upon mechanical feed machines (inj. rec. p. 387). As pointed out in Tainter's U. S. patent No. 385,886, of July 10, 1888, the disc graphophone was adapted to operate with a record of lateral, as well as with a record of vertical, undulations (inj. rec. p. 443, lines 7-15). Berliner and Edison, by the patents above mentioned of the prior art, had pointed out the same thing.

Judge Hazel, in construing claims 5 and 35 of the patent in suit, held that the *kind* of record employed was no part of the invention. The invention, he held, as above pointed out at pp. 9-12, consisted in discarding the feed-screw of the prior art as the means of causing the stylus to traverse the record, and in propelling the stylus "over the surface of the record, without mechanical assistance, and through the means of the groove alone" (140 Fed. 863). Judge Hazel said (140 Fed. 864):—

> "The broad claims in suit in my judgment cannot be restricted to a record of even depth, such as described in the specification."

But whether the claims in suit are limited by a record of even depth as an element of the combination thereof, or are not so limited, *it is a proposition, which admits of no dispute, that the*

sound-record is an unpatented article of the prior art, nowhere claimed in the patent in suit. The essence of the invention of the claims in suit resided therefore, not in the sound-record, but in the mounting of a stylus, by means of a universal joint or swinging arm or the like, in such manner that it is free to be propelled by the groove of the disc sound-record of the prior art, which record was used for the reproduction of sound in the prior art in precisely the same manner, except that in the prior art, according to Judge Hazel's decision in the prior suit, the stylus was not free to be propelled by the groove of the record, but was propelled by such mechanical assistance as that afforded by a feed-screw.

The Mechanical Feed-Device Machines of the Prior Art and the Present Day.

It will be seen that in the decree for contempt (con. rec. p. 112), Judge Lacombe expressly excepted "mechanical feed" device machines from the finding of contempt. It is the sale of records by defendant with the intent that said records shall be used in combination with the other elements of claim 35 in machines (other than "mechanical feed" machines) sold by complainants or their licensees combined with such records, for use in carrying out the method of claim 5, which Judge Lacombe has held is a violation of the injunction herein. The sale of such records for use on mechanical feed machines is concededly not a violation thereof.

This finding of Judge Lacombe with reference to mechanical feed machines was based upon the following facts proved by the evidence. As shown by the evidence (aff. Hicks, con. rec. pages 102-103):—

"Upon the argument of the motion for pre-

liminary injunction in this suit before Judge Townsend, complainants' counsel refused to contend that the mechanical feed-device Talk-o-phone was an infringement of claim 5 or claim 35 of the patent in suit. Upon this point complainants' counsel said in his brief :

> 'As these so-called 'mechanical feed' machines have not been offered in this case as alleged infringing machines, it is not an issue now in these suits.'

"Complainants' counsel, therefore, refused to discuss the question of the mechanical feed-device Talk-o-phones and stated that he presumed

> 'that the Court does not desire, without the benefit of a full discussion, to say, upon these motions, whether these so-called 'mechanical feed' machines are, or are not, mere attempted evasions of claims 5 and 35 of the patent in suit.'

"In view of the prior art and of Judge Hazel's finding, which also was the finding of the Circuit Court of Appeals in the prior suit, that the propelling of the stylus over the surface of the record without mechanical assistance and through the means of the groove alone was the primary object of the inventor, Berliner, the reason underlying the refusal of complainants' counsel to contend that mechanical feed-device machines were an infringement appears."

Referring to mechanical feed machines, Mr. Leeds, in his affidavit, says (con. rec. pp. 52-53);—

> "On Monday, October 15, 1906, defendant began to use and sell its sound records in connection with said feed-device machines exclusively, and on October 13, 1906, defendant ordered and purchased from the Talk-O-Phone Company one hundred such feed-device machines for use and sale in connection with its sound-records, receiving

> the first consignment thereof early Monday morning, October 15, 1906. As fully shown in the annexed affidavit of defendants' counsel, complainants on the motion for preliminary injunction refused to contend that such feed-device machines were an infringement of any of the claims of the patent in suit, alleging that such mechanical feed-device machines were not in issue in this suit, and complainants' counsel requested the Court not to pass upon such mechanical feed device machines, stating that the Court presumably would not desire to do so without a full discussion, which complainants' counsel refused to make. The Leeds & Catlin Company have been advised by counsel for defendant that such mechanical feed-device machines are not an infringement of the patent in suit, have not been held by the courts to be an infringement of the patent in suit, are not included in the terms of the preliminary injunction issued in this suit, and that complainant's counsel has refused to contend in this suit that such mechanical feed-device machines are an infringement of the patent in suit."

Upon the appeal from the order for preliminary injunction herein, complainants' counsel, referring to defendant's exhibit of defendant's mechanical feed-device Talk-o-phone, again refused to contend that feed-device machines used with disc sound records of lateral undulations and uniform depth were an infringement of claims 5 and 35 of the patent in suit, but as stated in his brief on appeal (p. 197) said:—

> "The court below very properly refused to consider the exhibit, as it was *not* one of defendant's machines purchased by the complainants *or charged with infringement in this case*."

In view of the position taken by complainants' counsel with reference to mechanical feed ma-

chines, defendant's counsel, under Point Ffteen (p. 195) of defendant's brief in the Circuit Court of Appeals, dealing with the point that mechanical feed-device machines do not infringe claims 5 and 35 of the patent in suit, said;--

> "As complainants, in the Circuit Court, refused to contend that the Talk-o-phones, operating by mechanical feed-devices, are an infringement of claims 5 and 35, this point is of importance only in so far as it bears upon the prior art."

Under Point Twelve (p. 187) of defendant's brief in the Circuit Court of Appeals, defendant's counsel stated the sole question of infringement charged by complainants; and referring, not to the mechanical feed-device Talk o-phones, but to Talk-o-phones without mechanical feed-devices, said;—

> "Complainants allege and show by a moving affidavit, however, that the Leeds & Catlin Company sold one of these Talk-o-phones. This raises the question of infringement with reference to the machines as to both defendants, although obviously the question is of small importance as far as the Leeds & Catlin Company is concerned, but of great importance as far as the Talk-O Phone Company is concerned."

It has already been shown in considering above the vital element of claims 5 and 35 in suit, that mechanical feed-device machines were employed in the prior art for the reproduction of sound from disc and cylindrical records of all kinds, especially from disc sound records of lateral undulations and uniform depth. When considering the disc record of lateral undulations and uniform depth as an article of manufacture existing before the date of the invention of the patent in suit, it was shown (*supra*, p. 28) that mechanical feed machines, adapted for the reproduction of sound from disc sound records, lie at

the very basis of the art of recording and reproducing sound, and have been in existence ever since Mr. Edison first invented the phonograph in 1877 (see English patent No. 1644 of 1878, inj. rec. p. 472), and Bell & Tainter first invented the graphophone (see U. S. Patent No. 341,214 of May 4, 1886 inj. rec. p. 387), and Berliner first devised his gramophone of the prior art for the reproduction of sound from disc and cylindrical sound records of lateral undulations and uniform depth, copied in solid resisting material, according to the various processes for which he secured letters-patent (see English patent No. 15,232 of Nov. 8, 1888, inj. rec. p. 516, Figs. 1 and 8; U. S. Patent No. 372,786, of Nov. 8, 1887, Fig. 1, inj. rec. p. 416; U. S. Patent No. 382,790 of May 15, 1888, inj. rec. p. 434; Electrical World for Nov. 12, 1887; inj. rec. p. 243, Figs. 1 and 2).

The evidence shows that such mechanical feed device machines have been manufactured and sold by the millions, from the time of Edison's invention of the phonograph in 1877 down to the present day, for the reproduction of sound from disc and cylindrical sound records of lateral and vertical undulations, and that the allegations of com-complainants' affiants that disc records of lateral undulations can be used only on the machines of claim 35 of the patent in suit are false. Of course this fact and the falsity of the allegations of complainants' affiants are conclusively established by the many patents of the prior art found in the injunction record and above referred to; the affidavits of defendant's experts, moreover, establish the same (affs., con. rec. E. F. Leeds, p. 52, fols. 156-175, p. 82, fols. 205-207; L. H. Bunker, p. 88, fols. 225-227, p. 90, fol. 231; L. L. Leeds, p. 92, fols. 237-247; L. Moeller, p. 96, fols. 249-255).

Defendant's disc sound records are articles of commerce sold for export, and exported, to foreign countries in large quantities.

The evidence on this point is uncontradicted and is set forth in defendant's affidavits (con. rec. E. F. Leeds, p. 59, fols. 176-178, p. 84; L. L. Leeds, p. 94, fol. 243; L. Moeller, p. 98, fol. 255).

Assignment of Errors.

The following is the assignment of errors (con. rec. p. 123):—

The Circuit Court erred in the following particulars:—

1. In holding that defendant violated the order and writ of injunction herein, in that defendant after said order and writ of injunction sold the *records* of claim 35 of the patent in suit, No. 534,543, of February 19, 1895, to Berliner, with the *intent* that said records should be used in combination with the other elements of that claim in *machines* (other than "mechanical feed" machines) *sold by complainants or their licensees combined with such records* for use in carrying out the method of claim 5 of said patent.

2. In holding that the order and writ of injunction herein enjoined and restrained defendant *in any way* from selling the *record* forming an element of the combination of claim 35 of the patent in suit.

3. In not holding that defendant, notwithstanding the order and writ of injunction herein, was at liberty to sell the *record* of claim 35 of the patent in suit for use in combination with the other elements of that claim in *machines, embodying the*

invention of claims 5 and 35 of the patent in suit, *sold by complainants or their licensees.*

4. In holding that the *intent* with which defendant sold records was a violation of the order and writ of injunction herein *without proof* that any record sold by defendant was *used* by the purchaser *in infringement* of claim 35 of the patent in suit.

5. In holding that the *intent* with which defendant sold records was a violation of the order and writ of injunction herein *without proof* that any record sold by defendant was *used* by the purchaser *in infringement* of claim 5 of the patent in suit.

6. In holding that the *intent* with which defendant sold records was a violation of the order and writ of injunction herein *without proof* that defendant *knew or was informed* that the *purchaser intended* to use a record purchased, *in infringement* of claim 5 or claim 35 of the patent in suit.

7. In holding that the selling of records by defendant to be used by the purchaser to *replace* a record purchased by him, from complainants or their licensees, together with a machine, embodying in combination the invention of claims 5 and 35 of the patent in suit, was a violation of the order and writ of injunction herein.

8. In not holding that, under the order and writ of injunction herein, defendant was at liberty to sell records to purchasers, from complainants or their licensees, of machines and records, embodying in combination the invention of claims 5 and 35 of the patent in suit, to enable such purchaser *to repair* the combination of such machine and record when the record should be *worn by use or broken*.

9. In holding that the question of defendant's right to sell records for use on machines embodying the invention of claims 5 and 35 of the patent in suit, sold by complainants or their licensees, had been *adjudicated* by the Court against defendant on the motion for or by the order and writ of injunction herein.

10. In not holding that the question of defendant's right to sell records for use on machines embodying the invention of claims 5 and 35 of the patent in suit, sold by complainants or their licensees, was *a new and doubtful question which was raised for the first time* upon the motion to punish defendant for contempt, and which should not be passed upon in any such proceeding as a proceeding to punish for contempt.

11. In not holding that the records sold by defendant were adapted for *a useful purpose* other than for use upon machines embodying the invention of claims 5 and 35 of the patent in suit, and that defendant was, therefore, at liberty to sell such records on the *open market.*

12. In holding that defendant sold records with the *intent* that the same should be used in combination with the other elements of claim 35 of the patent in suit on machines sold by complainants or their licensees.

13. In not holding that the purchaser, from complainants or their licensees, of a machine and record embodying in combination the invention of claims 5 and 35 of the patent in suit, had *a legal right to improve upon* the said combination as he saw fit, and that defendant had a right to sell records to such purchaser to enable him to accomplish such purpose.

14. In holding that defendant by the sale of records *contributed to infringement* of claims 5 and

35 of the patent in suit, and thereby violated the order and writ of injunction.

15. In not holding that the record is *a perishable, temporary element* of the combination forming the machine embodying the invention of claims 5 and 35 of the patent in suit, *which must be, and is intended to be, frequently replaced*, and that defendant had the right to sell such records to the purchasers of such combination from complainants or their licensees to enable them *frequently to replace* such perishable, temporary records or parts of the combination.

16. In not holding that complainants and their licensees sold the combination embodying the invention of claims 5 and 35 of the patent in suit to purchasers *without restriction* as to the records to be used to replace those purchased, and that defendant, by reason thereof, had the right to sell records to such purchasers for use in replacing records so purchased with machines from complainants and their licensees.

17. In not holding that defendant's records were *articles of commerce* which defendant could legally sell for *export* to foreign countries, for use in the United States on *mechanical feed-device machines* and for other lawful purposes, and that the sale of records by defendant on the *open market* was, therefore, a lawful act and not a violation of the order or writ of injunction herein.

18. In holding that the question of *contributory infringement* was involved in the sale by defendant of its records, the court *not* finding that defendant sold a record to any person who *constructed the other elements* of claim 35 of the patent in suit for use with such record or to any person who *used such other elements*, except persons who had purchased the same, together with records, from complainants or their licensees.

19. In holding that defendant sold records with an *intent to contribute to the infringing act* of another and in violation of the order and writ of injunction herein.

20. In construing claims 5 and 35 of the patent in suit and the order and writ of injunction herein so as to give to complainants *a monopoly of the unpatented record* forming part of the combination of claim 35.

21. In not holding that when complainants or their licensees sold the combination of claim 35 of the patent in suit, said *combination passed out of the monopoly of the patent* and the purchaser thereof had the *right to repair, improve upon and use the same as if dealing with property of any other kind*, and, therefore, the right to purchase from defendant records *to replace* the records of the purchased combination.

22. In not holding that complainants and their licensees, by the selling of *the elements, other than the record*, of claim 35 of the patent in suit, *impliedly licensed* the purchaser thereof to combine a suitable record with such purchased elements, and for that purpose to purchase such a record from persons other than complainants or their licensees.

23. In holding that the *substitution* of a new record for a record of the combination of claim 35 of the patent in suit is *not a repair* of the combination.

24. In holding that the *substitution* of a new record for a record of the combination of claim 35 of the patent in suit is *not an improvement* of the combination.

25. In holding that a purchaser, from complainants or their licensees, of the combination of claim

35 of the patent in suit, had not the right to purchase from another than complainants or their licensees, a new record *to substitute* in the said combination the new record for the old record thereof *in order to increase his repertory of tunes*, and that defendant had not the right to sell a record to such purchaser for such purpose.

26. In holding that because a purchaser, from complainants or their licensees, of the combination of claim 35 of the patent in suit, may frequently purchase a new record to increase his repertory of tunes, he has not the right to purchase, from another than complainants or their licensees, a new record in order *to repair or improve* the said combination.

27. In adjudging defendant in contempt of the order and writ of injnction herein.

28. In adjudging that defendant had disobeyed the order and writ of injunction herein.

29. In adjudging that defendant be fined in any sum.

POINT ONE.

The sound record is a perishable, temporary element of the combination forming the machine of the patent in suit and it is intended that the sound record shall frequently be replaced. It is well settled law that purchasers of such combinations from the patentee or his licensees have the right to replace such perishable, temporary parts, and that any manufacturer has the right to sell such parts to such purchasers for such purpose. The Circuit Court, therefore, erred in holding that defendant violated the injunction by selling records with the intent that the same should be used in combination with the other elements of claim 35, in machines sold by complainants or their licensees combined with such records.

(See assignment of errors, Nos. 1, 3, 7, 8, 13, 15, 20, 21, 22, 23, 24, 25, 26, *supra*, p. 36).

There is no distinction whatever between the question here involved and the question involved in *Morgan Envelope Co.* v. *Albany Paper Co.*, decided by Judge Wallace (40 Fed. 577) and the Supreme Court (152 U. S. 425). The principle of law applicable to this case, was so clearly stated by Judge Wallace and by the Supreme Court in the Morgan Envelope Company case that any attempted distinction between the facts of this case and the facts of the Morgan Envelope Company case must be understood as a

rejection of the principle of law settled and decided by the Supreme Court in the Morgan Envelope Company case. As above pointed out at page 16 of this brief, the evidence conclusively establishes that the sound record is a perishable, temporary element of the combination forming the sound reproducing apparatus of the patent in suit, and that it is intended that the sound record shall frequently be replaced. The elements of the apparatus, other than the sound record, will last indefinitely for years. The sound record, because of the marvelous delicacy of the undulations of the record-groove, and because of the fragility of the material in which it is formed and because of the constant wear of the reproducing stylus upon the delicate undulations constituting the record-groove, may be worn out or broken or otherwise rendered unsatisfactory or useless within even the short space of an hour or a day. The record cannot be used in the sound reproducing apparatus for the reproduction of sound therefrom for any considerable number of times without the certain destruction of the record. Unless the sound record be replaced at short intervals, the sound reproducing apparatus, of which the record is an element, would be of little use to the inventor or to others. This being so, the inventor, Berliner, so devised and constructed the sound reproducing apparatus of the patent in suit that the perishible, temporary element, namely, the record, could be easily placed upon and taken off from the disc turn-table which holds it during the operation of the apparatus while sound is reproduced therefrom. The other elements of the combination, constituting the sound reproducing apparatus, were devised and constructed to last for years. The testimony on behalf of complainants is that they sell the sound reproducing apparatus, including the record, form-

ing the combination of claim 35 of the patent in suit, and that purchasers of the apparatus from complainants and their licensees constantly purchase new records, with the result that as time goes on the purchaser is obliged to expend far more for records than he originally expended for the machine combined with a record. The record is an unpatented article of commerce, which was known and used in the prior art. Complainants seek a monopoly of the unpatented sound record because, forsooth, it is adapted for use as a perishable, temporary element of the patented combination as well as for use as a perishable, temporary element upon the mechanical feed machines of the prior art.

When the learned Circuit Judge stated that the disc sound-record is wholly unlike the toilet paper of the Morgan Envelope Company case, giving as the reason that the toilet paper was destroyed by a single use, he clearly erred. The learned Judge conceded, as he was bound to concede, that the disc sound-records wear out and that purchasers frequently bought new records "as substitutes for worn out discs." Obviously, it is not true that the toilet paper is destroyed by a single use. The roll of toilet paper, forming a perishable, temporary element of the patented combination of the Morgan Envelope Company case, will serve not for a single use, but for many uses and until the last sheet of the many sheets of the roll has been used. In like manner, the disc sound record is used to reproduce sound therefrom several times until at last, after a number of uses, the sound record is worn out, broken or otherwise destroyed. The sound-record, like the toilet paper, is destroyed in the use thereof. In the use of the reproducing apparatus, the sound is delivered from the record and the record is destroyed, just as in the use of the fixtures forming with the paper rolls the patented

combination of the Morgan Envelope Company case the paper is delivered and destroyed. When the learned Circuit Judge endeavored to distinguish the sound-record from the toilet paper, upon the ground that the toilet paper was destroyed by a single use, he had in mind, no doubt, the cotton-tie case hereafter referred to, where the cotton-tie was entirely destroyed by a single use, just as a torpedo is destroyed by a single explosion. There is, however, no analogy whatever between the case of the toilet paper and the case of the cotton-tie, as pointed out by the Supreme Court in the Morgan Envelope Company case. The cotton-tie was sold subject to a license for a single use only, and the tie was, in fact, destroyed by the single use. Such was not, however, the case with the combination of which the toilet paper was a perishable, temporary element. The *fixture* was not destroyed by the use and destruction of the paper, as the Supreme Court pointed out, nor is the *sound reproducing apparatus* destroyed by the use and destruction of the sound-record forming an element or part thereof. To restore the combination of which the toilet paper forms a part, it is necessary merely to replace the toilet paper; and, in like manner, to restore the combination of which the record forms a part, it is necessary merely to replace the record. In neither case is there a reconstruction of the patented combination, but in each case there is merely the replacement of a perishable, temporary part.

The sound-record wears out just as the cutter-knives, forming part of the patented combination of the planing machine in *Wilson* v. *Simpson*, *infra*, where it was held that the purchaser had the right to replace the cutter-knives at short intervals. In the Morgan Envelope Company case, the Supreme Court stated that the replacement

of the toilet paper was nearly analogous to the replacement of the cutter-knives. Clearly the replacement of the sound record is *exactly* the same in principle as the replacement of the cutter-knives. In the construction of the planing machine, it was intended that the cutter knives should be replaced at short intervals, because the machine could not be continued in use without a succession of knives at short intervals. So, in the construction of the sound reproducing apparatus, it is intended that the sound record shall be replaced at short intervals, and as already clearly shown, the apparatus cannot be continued in use without a succession of records at short intervals. It was not intended that there should be a complete destruction of the planing machine when the cutter-knife was worn out, nor is it intended that there shall be a complete destruction of the sound reproducing apparatus when the record is worn out. On the contrary, complainants constantly sell to a purchaser of a single machine, new sound records to be substituted for the sound record or records originally purchased with the machine. In the cotton-tie case, it was intended that there should be, and there was, in fact, a complete destruction of the tie as a result of the single use thereof.

The learned Circuit Judge in his opinion also referred to the carbon-filament case (*Daris Elec. Works* vs. *Edison El. Light Co.* 60 Fed. 276). In the carbon filament case there was, however, by the use of the patented combination of which the carbon-filament was an element, such a complete destruction of the combination that a reconstruction of the combination was necessary in order to replace the carbon filament. The carbon-filament case is exactly like the cotton-tie case, and rests upon the same principle and has no

analogy whatever to this case or to the case of the cutter-knives, or to the case of the toilet paper.

The clear distinction between the carbon filament case and the case at bar appears from the following quotation from the opinion of the Circuit Court of Appeals in that case (60 Fed. 276, 281);—

> "The appellants do not bring themselves within the expression in Wilson v. Simpson, 9 How. 125, renewed in substance in Cotton Tie Co. v. Simmons, 106 U. S. 94, to the effect that *temporary parts may be replaced 'in accordance with the intention of the vendor.'* While the supreme court has not expressly given this as a limitation, it may be made effectual as a permit where the facts authorize it. In this case the plan of construction, which permits no severance of the parts by any ordinary method of detachment, the sale price of the entire device, about 30 cents, the comparatively large cost of the so-called reparation, the special skill required to make it, the fact proven that the device is made so cheaply that it can be thrown away without substantial loss when the filament is worn out, and the experience that, though the patent had run about 13 years, and some 13,000,000 lamps had been made before respondents below commenced the so called reparations, destruction of the lamp after the filament was worn out had been the rule, distinguish this device in this respect from those which preceded it, exclude the suggestion of either express or implied assent by the patentees to a renewal of the filament, and compel the appellants to meet directly the issue of reparation as against reconstruction."

In the case at bar the temporary sound record is frequently replaced "in accordance with the intention of the vendor." Complainants constantly supply purchasers of their machines combined with records, with new records to replace the old records. The facts of the case at bar, therefore, au-

thorize the purchaser constantly to replace the temporary record. The plan of construction of the sound reproducing apparatus permits the severance of the record by the simplest and most ordinary method of detachment and the price of the record, from 35 cents to $5, is exceedingly small when compared with the price of the machine, which varies from $17 to $100.

There never was a sound reproducing apparatus sold, combined with a record, to a purchaser who did not frequently replace the record. The distinction between the principle and the facts of the carbon-filament case and the principle and the facts of a case such as the case at bar, is so clear and has been so often pointed out in the opinions of the courts, that it requires no further argument to show that the learned Circuit Judge erred when he held that the substitution of a new record for an old record in the combination of claim 35 of the patent in suit was not, in any legitimate sense, "repairs," and cited, in support thereof, the carbon-filament case.

The Circuit Court of Appeals for the First Circuit, which decided the carbon-filament case, distinguished the cotton tie case and the carbon-filament case from the cutter-knives case, according to the principles above stated, in *Goodyear Co.* v. *Jackson* (112 Fed. 146, 150), where the Court said:

> "When the patent is for *a single thing*, like a knitting needle, for example, and not for a device or machine composed of several things or elements combined, it is obvious that the replacement of an old needle by a new one in a knitting machine is not repair, but *a reproduction of the patented thing*. Aiken v. Manchester Print Works, 2 Cliff., 435; Morgan Envelope Co. v. Albany Paper Co., 152 U. S. 425, 435; Wilson v. Simpson, 9 How. 109, 124.
>
> When the patent is for a device embracing

the combination of several elements, a purchaser will infringe by reconstructing the device after it has fulfilled its purpose and is substantially destroyed. Where, for instance, the patent was for a cotton-bale tie, consisting of a band and buckle, and 'licensed to use once only,' it is manifest that the severance of the band at the cotton mill was intended to operate as *a destruction of the tie*, and that to roll and straighten the pieces of the band and rivet the ends together, at the same time using the old buckle, was a *reconstruction* of the tie, and not repair. Cotton-Tie Co. v. Simmons, 106 U. S. 89.

Again, where the subject of the patent was an electric lamp, and the invention resided in the discovery that an attenuated carbon filament, if operated in a high vacuum would withstand disintegration and the claim was for the combination of carbon filaments with a receiver made entirely of glass, and conductors passing through the glass, from which receiver the air is exhausted, it is plain that, *when the filament is destroyed, and the vacuum is destroyed by making a hole in the receiver, and nothing remains but a perforated glass bulb and the conductors, the lamp is practically destroyed*, and that to replace the old filament with a new one, and again exhaust the air in the receiver and again seal it, is substantially the making of a new lamp. Davis Electrical Works v. Edison Electric Light Co., 60 Fed. 276.

Where the patent is for a machine, which commonly embraces the combination of many constituent elements, the question of infringement by the purchaser will turn upon whether the machine is only partially worn out or partially destroyed, or is entirely worn out, and so beyond repair in a practical sense. In the case of a patent for a planing machine composed of many parts it was held that the replacement of the rotary knives, *'the effective ultimate tool of the machine*, was repair, and not reconstruction. Wilson v. Simpson, 9 How. 109. In that case the Supreme Court rested its

decision on two grounds: (1) *The right of the owner to replace a material part of the patented combination;* and (2) *the right to replace a part of the machine which it was known would quickly wear out, such replacement being necessary to a continued use of the machine, and therefore contemplated by the patentee when the machine was sold.* The decision in that case contains a careful discussion of the rights of a purchaser of a patented machine, and of the fundamental grounds on which those rights are based, and of the difference between repair and reconstruction."

The Morgan Envelope Company Case in the Circuit Court and Judge Wallace's Opinion Therein (40 Fed. 577).

After stating that three patents were involved in the suit, Judge Wallace held that the first patent for a package of toilet paper was "invalid for want of novelty" (p. 578). The learned judge then held that the other two patents for the combination of the package of toilet paper and mechanism to be used therewith disclosed and claimed "an ingenious and meritorious invention" (p. 579). The package of toilet paper stood, therefore, as an unpatented article, forming, however, an element of a combination based upon "an ingenious and meritorious invention." The question was, as stated by Judge Wallace (p. 580), whether defendant infringed by selling rolls of oval paper which they manufactured to persons who bought the paper and fixtures from the complainant, and having used up the paper wished to get more to use with the fixtures. This is the precise question here involved, never presented to any court in this litigation and never passed upon by any court in any form in this litigation before the motion for contempt herein, namely; whether defendant has the

right to sell sound-records, an unpatented article of the prior art, for use upon the hundreds of thousands of machines sold, *combined with records*, by complainants and their licensees to purchasers within the United States. *Under Judge Wallace's decision defendant unquestionably has that right.* Judge Wallace said (p. 580):—

> 'In other words, the case is as though the defendants were charged with infringement because they sell rolls of oval paper which they manufacture to persons who have bought the paper and fixtures from the complainant, and, having used up the paper, wish to get more to use with the fixtures. *The sale of the paper to those who have a lawful right to use the fixture*, and *to use both the fixture and paper together, is not an invasion of the rights of the complainant.* The paper, as an element of the patented invention, is one for *temporary* use only. The fixture proper is a durable device, which is designed to last for many years; while the roll of paper may be completely used up in a few days. This circumstance repels any inference that the right of a purchaser to use the fixture does not survive the life of the paper. The purchaser who buys a machine or device, patented or unpatented, without any restriction as to the mode or extent of the use to which he may apply it acquires all the rights of the seller and may do with it whatever the seller might have done if he had not parted with it. He acquires the right to use it, to repair it, and to sell it to others; and those to whom he sells acquire all his rights. If the original vendor is the licensee of the article, a purchase of the article from him is, in legal effect, a purchase from the owner of the patent. *The sale of the article transfers the monopoly right in the article itself without qualification. Holliday* v. *Matheson*, 23 Blatchf. 239, 24 Fed. Rep. 185. If the purchaser may lawfully *repair* the article, or *remove a part of it and substitute another*, it is quite immaterial whether

> he does it by his own hands or *procures another to do it for him*; and if the act when done by himself does not violate the rights of the owner of the patent, it does not when performed by another at his request."

Judge Wallace then pointed out (p. 581) that the law as above stated by him had been distinctly declared by the Supreme Court in *Wilson* v. *Rousseau*, 4 How. 647 and in *Wilson* v. *Simpson*, 9 How. 109. Judge Wallace then distinguished (p. 581) the case of *Cotton-Tie Co.* v. *Simmons*, 106 U. S. 89, as follows;—

> "There the patented article was sold *'licensed to use once only'*, and after it was practically worn out, and the right of the purchaser to use it had terminated, another person, who bought the parts as old iron, *reconstructed* them anew into the patented article. *If in this case the fixtures had been worn out or had in any other way fully subserved the use for which they were intended when sold*, the doctrine of that case would apply."

Judge Wallace then pointed out that the law of contributory infringement had no application to the case. The attention of the court is directed to this holding of Judge Wallace, affirmed by the Supreme Court, that the law of contributory infringement had no application to the case, because complainants' counsel based his entire argument, in the Court below, upon the law of contributory infringement which has no application whatever to the question here involved. Judge Wallace said (p. 581);—

> "The law of contributory infringement has no application to the case. That doctrine rests on the principle that he who concerts with another to do a wrong is an abettor, and equally guilty with the one who actually commits it. Here no wrong has been committed."

The same rule was stated in *Goodyear Co.* v. *Jackson*, 112 Fed. 146 (C. C. A.) where, after a full review of the authorities, it was held that "contributory infringement cannot be predicated of the rebuilding or replacing of parts of a patented machine by a purchaser for his own use."

In the case at bar there was not a particle of proof that defendant after the injunction sold a sound-record for use upon an infringing machine or to complete an infringing machine; nor did the Circuit Court find that defendant had committed any such violation of the injunction. The sale of a record by defendant for use upon an infringing machine, that is to say, for use upon a machine not sold by complainants or their licensees, would clearly constitute contributory infringement. Complainants' counsel urged the Circuit Court to hold that because the records sold by defendant *might* be used on infringing machines, defendant was in contempt; but the Circuit Court refused to make any such ridiculous finding upon such matter of mere conjecture. This untenable proposition of complainants' counsel, that infringement may be conjectured, has been rejected by repeated decisions of the courts. Judge Wallace emphatically disposed of it as follows (p. 581):—

> "The complainant cannot rely upon the inconclusive statement, elicited upon cross-examination from the defendant Wheeler, to establish a sale by the defendants of paper with fixtures which had not been sold by the complainant. It would be mere guess-work to infer from that testimony that the fixtures thus sold were not originally made and sold by the complainant. The affirmative upon the issue of infringement is with the complainant, and the *onus* of proof is not satisfied merely by showing a state of facts from which infringement may be conjectured."

The Morgan Envelope Company case in the Supreme Court and the Supreme Court's Opinion therein (152 U. S. 425).

The leading case upon the question here involved is the decision of the Supreme Court in *Wilson* v. *Simpson*, 9 How. 109, the *principle* of which was applied by the Supreme Court in *Morgan Envelope Co.* v. *Albany Paper Co.*, 152 U. S. 425. In connection with these two cases the decision of Mr. Justice Clifford in *Aiken* v. *Manchester Print Works*, 2 Cliff., 435, should be considered, since, as stated by the Supreme Court in the Morgan Envelope Company case, Mr. Justice Clifford there pointed out the true distinction between the circumstances under which a purchaser of a patented combination could replace a temporary part of the combination and the circumstances under which he could not replace such temporary part of the combination. In *Wilson* v. *Simpson*, and in *Morgan Envelope Co.* v. *Albany Paper Co.*, the Supreme Court held that an unpatented temporary part of a patented combination could be replaced by the purchaser of the combination from the patentee. In *Aiken* v. *Manchester Print Works*, Mr. Justice Clifford held that the purchaser of a combination protected by a patent could not replace a temporary part of such combination where such temporary part was protected by a separate patent. Since the sound-record which forms a temporary part of the combination of the patent in suit is not a patented article, it is clear, under the decisions cited, that the purchaser from complainants and their licensees of the combination of the patent in suit has a legal right to replace the temporary sound-record and to obtain the sound-record from defendant for such purpose. A con-

sideration of the three cases cited will show this to be in accordance with the settled law.

In *Morgan Envelope Co.* v. *Albany Paper Co.*, 152 U. S., 425, the Court stated that three patents were involved, one for a package of toilet paper and two, which were practically the same, for a combination of the package of toilet paper described in the first patent with a mechanism for the delivery of the paper to the user. Upon a consideration of the evidence, the Supreme Court held that the first patent for a package of toilet paper was void, and the question was whether the defendants had infringed the other two patents for the combination. It appeared (p. 431) that defendants neither made, sold or used the mechanism to serve out the toilet paper,

> "except as they purchased it of the patentee and *the only acts proven against them were in selling oral rolls of paper of their own manufacture with fixtures manufactured and sold by the plaintiff in combination with its (plaintiff's) paper* to persons other than the defendants, the fixtures having been obtained by defendants from the original purchasers of the patented combination; and *also of selling oral rolls of paper of defendant's own manufacture to persons who had previously purchased fixtures and paper from the plaintiff*, with the knowledge and intention that the paper was sold to be used in connection with the plaintiff's fixtures. In this connection it appeared that it had not been the practice of the plaintiff to sell its fixtures independently of its paper and that they sold only to such parties as dealt in and used their paper. * * * It appears to have been its invariable rule to refuse to sell fixtures except to persons also ordering paper."

Upon these facts, which are essentially the facts of the case at bar found by the Court below, the Supreme Court said (p. 432):—

> "*The real question in this case, is, whether*

conceding the combination of the oval roll with the fixtures to be a valid combination; the sale of one element of such combination, with the intent that it shall be used with the other element, is an infringement. We are of opinion that it is not. There are doubtless many cases to the effect that the manufacture and sale of a single element of a combination, with intent that it shall be united to the other element, and so complete the combination, is an infringement. *Saxe* v. *Hammond*, Holmes, 456; *Wallace* v. *Holmes*, 9 Blatchford, 65; *Barnes* v. *Strauss*, 9 Blatchford, 553; *Schneider* v. *Poultney*, 21 Fed. Rep., 399. But we think these cases have no application to one where the element made by the alleged infringer is an article of manufacture *perishable in its nature*, which it is the object of the mechanism to deliver, and which must be renewed *periodically, whenever the device is put to use.* Of course, if the product itself is the subject of a valid patent, it would be an infringement of *that patent* to purchase such product of another than the patentee; *but if the product be unpatentable, it is giving to the patentee of the machine the benefit of a patent upon the product, by requiring such product to be bought of him.*"

Referring to the case of the *Cotton Tie Co.* v. *Simmons*, 106 U. S., 83, 93, the Supreme Court said that that case presented "no difficulty whatever," and further said (p. 434);—

"It is evident that the use of the tie was intended to be as complete a destruction of it as would be the explosion of a patented torpedo. In either case, the repair of the band or the refilling of the shell would be a practical reconstruction of the device. *In this case, however, the purchaser of the new roll does precisely what the patentee intended he should do; he replaces that which is in its nature perishable, and without the replacement of which the remainder of the device is*

of no value. The replacement is of a product which it is the object of the mechanism to deliver."

Continuing, the Supreme Court, referring to the case of *Wilson* v. *Simpson*, then said (p. 434);—

> "The case is more nearly analogous to that of *Wilson* v. *Simpson*, 9 How., 109, in which the invention involved was a planing machine, and the patent sued upon covered the combination with the cutting knives or planes of a pressure roller to effect the planing of the planks. It was proved that one of the machines would last in use for several years, but that its cutting knives would wear out, and must be replaced at least every sixty or ninety days. It was said by Mr. Justice Wayne, (p. 125) that
>
> '*the right to replace them was a part of the invention transferred to the assignee for the time he bought it*, without which his purchase would be useless to him, except for sixty or ninety days after a machine had been put in use. It has not been contended, nor can it be, that such be a limitation of the assignee's right in the use of the invention.
>
> '*If, then, the use of the machine depends upon the replacement of the knives*, (and the assignee could replace them from time to time, as they were needed, during the first term of the patent, *though they are an essential and distinct constitutent of the principle or combination of the invention,*) *frequently replacing them, according to the intention of the inventor*, is not a reconstruction of the invention, but the use only of so much of it as is absolutely necessary to identify the machine with what it was in the beginning of its use, or before that part of it had been worn out.
>
> 'The right of the assignee to replace the cutter-knives is *not because they are of perishable materials*, but *because the inventor*

> *of the machine has so arranged them as a part of the combination, that the machine could not be continued in use without a succession of knives at short intervals.* Unless they were replaced, the invention would have been of little use to the inventor or to others.' "

In *Wilson* v. *Simpson*, immediately following the part above quoted from the opinion therein by the Supreme Court in the Morgan Envelope Company case, the Supreme Court further said;—

> "The other constituent parts of this invention, though liable to be worn out, are not made with reference to any use of them which will require them to be replaced. These, without having a definite duration, are contemplated by the inventor to last so long as the materials of which they are formed can hold together in use in such combination. No replacement of them at intermediate intervals is meant or is necessary. *They may be repaired as the use may require.* With such intentions, they are put into the structure. So it is understood by a purchaser, and beyond the duration of them a purchaser of the machine has not a longer use. *But if another constituent part of the combination is meant to be only temporary in the use of the whole, and to be frequently replaced, because it will not last as long as the other parts of the combination, its inventor cannot complain, if he sells the use of his machine, that the purchaser uses it in the way the inventor meant it to be used, and in the only way in which the machine can be used.*
>
> "*Such a replacement of temporary parts does not alter the identity of the machine, but preserves it, though there may not be in it every part of its original material.*' "

In the Morgan Envelope Company case, the Supreme Court, after stating that the case was more nearly analogous to that of *Wilson* v. *Simpson*, and after quoting, as above shown, from the opinion of

Mr. Justice Wayne in that case, then said (p. 435);—

> "The true distinction is stated by Mr. Justice Clifford in *Aiken* v. *Manchester Print Works*, 2 Cliff., 435, where the invention was of a knitting machine, with which the vendor was accustomed to send a package of the needles used in the machine, which needles were the subject of a *separate patent*. It was held that the purchase of the knitting machine, and the needles accompanying the same, did not confer upon the purchaser any right, after the needles were worn out and became useless, to manufacture other needles, and use the same in the knitting-machines so sold and purchased. The case of *Wilson* v. *Simpson* was distinguished from this in the fact that the cutters and knives in that case were not subject to a patent, and of course the respondent had a right to use them as materials to repair his machine; 'but', says the court, '*unfortunately for the defendants in this case, the needle is subject to a patent*, and in making and using it they have infringed the right of the plaintiff.' *As we have already held that the paper roll in this case was not the subject of a valid patent, it follows that the defendants cannot be held as infringers for the manufacture and sale of such roll.*"

In *Wagner Typewriter Co. v. Webster Co.*, 144 Fed. 495, Judge Ray cites many of the leading cases sustaining the doctrine of the above cited cases.

POINT TWO.

This Court, following the decisions of the Supreme Court, has held that the purchaser of a patented combination has the legal right immediately to substitute for an important or essential element of the combination one which he conceives to be better suited to his purposes, even though such element was intended to be permanent; and that any one has an equal right to make and sell such elements to such purchaser for such purpose (*Thomson Houston Electric Co. v. Kelsey Co., 75 Fed. 1005.*)

(See assignment of errors, Nos. 1, 3, 7, 8, 13, 14, 19, 20, 21, 22, 23, 24, 25, 26, *supra*, p. 36.

The principle of the decision of this court is stated in the third head note of the case cited as follows;—

> "One who purchases the apparatus covered by the Van Depoele patent, No. 495,443, for an improvement in traveling contacts for electric railways, *has the right, immediately thereafter, to discard the element known as the 'trolley stand,' and purchase from another a different stand, which he conceives to be better suited to his purposes.* 72 Fed. 1016, modified."

Judge Shipman, writing the opinion of the court, said (p. 1010);—

> "If a purchaser from the complainant, chooses, the day after his purchase, to substitute a stand which is better made and better adapted to his peculiar needs, he has the right to do so."

Judge Wallace, concurring in the principle thus stated by Judge Shipman, but dissenting from the decision of the court since he thought that the decree for injunction should not merely be modified but reversed altogether, said (p. 1011);—

> "*Concededly*, they have a right to repair their trolley stands, to substitute new ones for those old or worn out, or *to substitute a better and improved kind for those originally bought of the complainant.* The defendants have an equal right to make and sell the stands to such owners for that purpose."

The legal principle thus stated by Judges Shipman and Wallace, and concurred in by Judge Lacombe, was embodied in the decision of the court, whereby the order granting the preliminary injunction was modified by adding the following words (p. 1010);—

> "It is not intended to enjoin the defendant against the sale of trolley stands, by way of replacement of broken stands, or stands worn by use or *substitution for trolley stands previously sold by the complainant to purchasers from it*, but this permission does not give authority to reconstruct or rebuild a combination which has been sold by the complainant."

Thus this court recognized not only the right of the purchaser of a patented combination to replace an element that was broken or worn by use, but also the right to substitute for an element of the combination purchased from the patentee another similar element which the purchaser preferred. This *right of substitution* is clearly a broader right than the right to repair. Judge Shipman, moreover, pointed out that this right of substitution extends not merely to the replacing of fragile elements, whose life is necessarily short, but also

to the replacing of an important element which was intended to be permanent (pp. 1008-1009); and that the right of substitution or replacement existed even "though it shall be a replacement of an essential part of a combination" (p. 1009), citing and quoting *Wilson* v. *Simpson*, 9 How. 109, which is quoted *supra*, p. 57.

Referring to the decision of the Supreme Court in *Wilson* v. *Simpson*, Judge Shipman also said (p. 1009);—

> "The distinction which the court was endeavoring to point out, and which it thought was well illustrated in the Woodworth planer, was the difference between the repair or replacement of a single element of a combination, and the manufacture of a new machine in place of one which had become useless."

The manufacture of a new machine is, of course, reconstruction and not within the rights of the purchaser, from the patentee, of a machine which has become useless; but the repair or replacement of a single element of the patented combination is not reconstruction and is within the rights of the purchaser. If the purchaser of the patented combination had the right, the day after his purchase, to purchase a new trolley stand and to substitute it for the trolley stand of the combination purchased from the patentee, it is clear that in the case at bar the purchaser, from complainants or their licensees, of the combination forming the sound reproducing apparatus of claim 35 of the patent in suit has the right to substitute for the record of the combination purchased from complainants or their licensees any other record which he desires to substitute, and that defendant had an equal right to make and sell records to such purchaser for that purpose.

Judge Shipman, in his opinion (p. 1008) distinguished the cotton-tie case (*Cotton-Tie Co.* v. *Sim-*

mons, 106 U. S. 89) and the carbon-filament case (*Davis El. Works* v. *Edison El. Light Co.*, 60 Fed. 276), upon the ground that those were cases of reconstruction of the patented combination, having no analogy to the repair or replacement of a single element of a combination. This distinction of the cotton-tie and carbon-filament cases, so uniformly made by the courts, has been fully dealt with under Point One of this brief (*supra*, pp. 45-50, 52, 56). In view of the decision of this court in the trolley stand case, now under consideration, it becomes still more clear that Judge Lacombe erred when, in his opinion in the case at bar, he cited the carbon filament case in support of the proposition that a purchaser had not the legal right to substitute a new record purchased from defendant for a record purchased as part of the patented combination from complainants or their licensees. The learned Circuit Judge stated that such substitution was not, in any legitimate sense, "repairs," because, he said, the new records were purchased more frequently in order to increase the repertory of tunes than as substitutes for worn out discs. This holding of the learned Circuit Judge involved two fundamental errors.

(a) Judge Lacombe overlooked entirely the purchaser's right of substitution or replacement of the single element, namely, the record, of the combination forming the sound reproducing apparatus.

(b) Judge Lacombe conceded that the original record of the combination purchased from complainants or their licensees became worn out, and then denied to the purchaser of the combination from complainants or their licensees, the undoubted right of repair, which the purchaser could clearly exercise by substituting a thousand records as well as a single record for the original worn out disc.

The right of replacement or substitution is a right which the purchaser of a patented combination may exercise at any time and in any manner he pleases and for any reason that may be sufficient to him. Judge Shipman says he may exercise it the day after his purchase; if so, he may exercise it immediately upon his purchase. He may exercise it not because his trolley stand or other element is broken or worn out by use, but because he likes some other trolley stand better. So the purchaser from complainants or their licensees of the sound reproducing apparatus forming the combination of the patent in suit, may exercise his right of substitution or replacement of the sound record at any time and for any reason.

The *right of substitution* is a right supported by an unbroken line of decisions of the Supreme Court. Judge Shipman referred (p. 1008) to *Chaffee* v. *Belting Co.*, 22 How. 217. In the Chaffee case Mr. Justice Clifford, writing the opinion of the Court, pointed out (p. 223) that the purchaser of a patented machine acquires the machine free from the monopoly of the patent, and in using the machine exercises no rights created by the act of Congress. By purchase, the patented machine becomes the individual property of the purchaser and is subject no longer to the laws of the United States, but is subject only to the laws of the State in which it is situated. In explanation of this principle, Mr. Justice Clifford said (p. 223):—

> "That rule rests upon the doctrine that the purchaser, in using the machine under such circumstances, exercises no rights created by the act of Congress, nor does he derive title to it by virtue of the franchise or the exclusive privilege granted to the patentee.
>
> "When the patented machine rightfully passes to the hands of the purchaser from the patentee, or from any other person by him

authorized to convey it, the machine is no longer within the limits of the monopoly. According to the decision of this court in the cases before mentioned, it then passes outside of the monopoly, and is no longer under the peculiar protection granted to patented rights. By a valid sale and purchase, the patented machine becomes the private individual property of the purchaser, and is no longer protected by the laws of the United States, but by the laws of the State in which it it situated. Hence it is obvious, that if a person legally acquires a title to that which is the subject of letters patent, *he may continue to use it, until it is worn out, or he may repair it or improve upon it, as he pleases, in the same manner as if dealing with property of any other kind.*"

In a later case, *Mitchell* v. *Hawley*, 16 Wall., 544, 548, Mr. Justice Clifford, again writing the opinion of the court, quoted with approval the part above quoted from the Chaffee case, and in addition held (p. 546), that patentees are "*entitled to but one royalty for a patented machine,*" and that when they have sold the patented machine *without any conditions* and the consideration has been paid, they must be understood to have *parted with all their exclusive rights* and to have *ceased to have any interest whatever in the patented machine* so sold. Hence arises the right of the purchaser to use the machine until it is worn out, to repair it and to improve upon it *as he pleases* in the same manner as if dealing with property of any other kind. The doctrine of the Mitchell case was followed by Judge Coxe in *Geo. Frost Co. v. Kora Co.*, 136 Fed. 487, aff'd 140 Fed. 387; and by Judge Hough in *National Co. v. Grobet*, 148 Fed 385, 387.

In *Bloomer* v. *McQuewan*, 14 How. 539, 549, Chief Justice Taney said:—

"When a machine passes to the hands of

> the purchaser, it is no longer within the limits of the monoply. It passes outside of it, and is no longer under the protection of the act of Congress."

In *Adams* v. *Burke*, 17 Wall. 453, 456, it was held, on the authority of the *Bloomer* case, that when patented machines "are once lawfully made and sold, there is no restriction on their *use* to be implied for the benefit of the patentee or his assignees or licensees." Mr. Justice Miller writing the opinion of the court in *Adams* v. *Burke* also said (p. 456);—

> "But, in the essential nature of things when the patentee or the person having his rights, sells a machine or instrument whose sole value is in its use, he receives the consideration for its use, and *he parts with the right to restrict that use.* The article, in the language of the courts, passes without the limit of the monopoly (*Bloomer* v. *McQuewan*, 14 Howard, 549; *Mitchell* v. *Hawley*, 16 Wallace, 544). That is to say, the patentee or his assignee having in the act of sale received all the royalty or consideration which he claims for the use of his invention in that particular machine or instrument, it is open to the use of the purchaser without further restriction on account of the monopoly of the patentees."

In *Edison El. Light Co.* v. *Peninsular Co.* 101 Fed. 831, 835, 837 (C. C. A.), it was held, citing *Adams* v. *Burke*, that the vendee, of apparatus adapted for use according to the system of distribution covered by an Edison patent, had the legal right to take the electric current from another than the vendor.

In *Hobbie* v. *Jenison*, 149 U. S., 355 and *Keeler* v. *Standard Folding Bed Co.*, 157 U. S., 659, it was held, following *Adams* v. *Burke*, as stated in the latter case, that

> "one who buys patented articles of manufacture from one authorized to sell them becomes possessed of an absolute property in such articles, unrestricted in time or place,"

and that the absolute property of the purchaser includes the *unrestricted* right to *sell* as well as *unrestricted* right to *use*.

The clear result of the authorities is that the patented sound reproducing apparatus, forming the combination of claim 35 of the patent in suit, passes out of the monopoly of the patent and the protection of the patent laws of the United States when sold unconditionally by complainants or their licensees. Complainants having received the consideration or royalty for the patented combination can claim no further interest therein and no restriction whatever can be implied on the use thereof in favor of complainants or their licensees. The purchaser acquires the right to deal with the sound reproducing apparatus as his individual property, free from the monopoly of the patent and free from the patent laws of the United States, and he may repair it and improve upon it in the same manner as if dealing with property of any other kind. Neither complainants nor their licensees can claim a further royalty or consideration, nor can they, by an attempt to restrict the use of the patented combination which they unconditionally sold and for which they received the full consideration, secure a monopoly of the unpatented sound-record.

Thus, the owner's *right of substitution* of a single element of a patented combination, purchased uncoaditionally from the patentee, is established by an unbroken line of decisions.

POINT THREE.

No question of contributory infringement is here involved. Judge Shipman's decision in Am. Graph. Co. v. Leeds, 87 Fed., 873, cited by the Court below, bears no analogy to the case at bar.

(See assignment of errors, Nos. 14, 17, 18, 19, 25, *supra*, p. 36).

Judge Shipman in the case above cited followed Judge Grosscup's decision in *Am. Graph. Co. v. Amet*, 74 Fed. 789. Both were cases of *contributory infringement*. The patent there in suit was the Bell & Tainter patent No. 341,214, of May 4, 1886 (inj. rec. p. 387), of which claims 22 and 24, especially, were relied upon. Those claims covered the combination of a sound record and a reproducer. It appeared in each case that the defendant manufactured and sold the *reproducing mechanism* or graphophone machine of the combination claimed in the patent. Purchasers of defendants' machines combined them with the other element of the combination, namely the record, which they purchased from the patentee, and thus *made* and *completed* the combination of the patent.

If, in the toilet paper case (*supra*, p. 54) the defendant had made and sold the *fixtures* of the patented combination of which the paper was a perishable, temporary element and the purchasers of the fixtures from the defendant had combined them with paper purchased from the patentee; or if, in the planing machine case (*supra* p. 57), the defendant had made the *machine* (without the cutter knives) of the patented combination of which the cutter knives were a temporary element and had combined it with cutter knives purchased from the

patentee; or if, in the case at bar, defendant had made and sold the sound reproducing apparatus (without the record) of the patented combination of which the perishable, temporary record is an element and purchasers of such apparatus from defendant had combined it with records purchased from complainants; in all such cases the facts would have been the same as, or analogous to, the facts in the Leeds and Amet cases decided by Judges Shipman and Grosscup and the defendants would have been guilty of contributory infringement.

The clear distinction, therefore, between the Leeds and Amet cases on the one hand and the case at bar, the toilet paper case and the cutter knives case on the other, is that in the former there was no sale by the patentee of the *combination* of the patent, while in the latter there was. Hence in the former the purchaser of the machine from the defendant and of the record from the patentee acquired no right at all to the *combination* and, therefore, no right to repair, replace, substitute or improve upon any element of the combination; while in the latter the purchaser of the *complete combination* from the patentee acquired all such rights.

The decisions of Judges Shipman and Grosscup are clear authorities in support of defendant's position in the case at bar. Judge Grosscup clearly recognized and stated the undoubted right of a purchaser from a patentee of a sound reproducing apparatus, forming a patented combination of which a record is an element, to replace the record, originally purchased as part of the combination, by a new record and such right, he clearly indicated, would exist whatever the purpose of replacement or substitution might be, whether to replace a record old, broken, scratched or worn out by use, or to substitute merely one

record for another, as in the trolley-stand case, (*supra*, p. 60) where Judge Shipman, speaking for this court, said that a purchaser of the patented combination of which it was a part, could substitute a new trolley stand for one purchased from the patentee immediately upon the purchase of the combination. Judge Grosscup said (*Am. Graph. Co.* v. *Amet*, 74 Fed. 789, 791):

> "It appears, however, that these *records* are sold by complainant on the open market, and it is contended that such sale releases this element of the combination from the monopoly of the patent. I do not concur in this view. To make the graphophone more widely useful, the complainants make many records, embodying music, speech, and other sounds, and distribute these, by sale, to the users of the phone. But the record thus distributed remains an integral part of the combined mechanism. It is not a product of the machine, but still a part of it. *It is not unusual, in many mechanisms, that some elements of their combination must be more frequently renewed than others. The sale of such parts, segregated from the machine, is only the replenishing of the combination by a substitution of a new element for the one worn out.* Such action does not break the patentability of the combination. *So, in this combination, substitution by sale of one or many records for another though not due to the same necessity, ought to receive the same consideration.* The keys of a piano may be replaced without releasing the combination of which the keys are an element from the monopoly of a patent. I can see no reason why the record of a graphophone may not, though for a different purpose, be likewise replaced without breaking the validity of the combination."

It is very clear, therefore, that in the Amet case defendant was not selling to a purchaser of the *combination* from the patentee a temporary part

or any part intended to replace a part of a combination purchased from the patentee. The mere sale of *records* by the patentee was not a sale of the *combination* but a sale for the purpose of enabling purchasers of the combination to repair or keep the combination useful when the records for any reason became useless. Judge Grosscup recognized that the sale of records was the same as the sale of parts to replenish a combination by a substitution of a new element for the one worn out. He says that the keys of a piano may be replaced without releasing the combination of which the keys are an element from the monopoly of a patent. This clearly means, and under the authorities must mean, that if the patentee had sold the combination consisting of the piano and the keys, or consisting of sound reproducing mechanism and a sound-record, the purchaser would have acquired the combination released from the monopoly of the patent and would in consequence have acquired the right to replace the keys of the piano or the sound-record in order to replenish the combination when the keys or the sound record required replacement.

What Judge Grosscup decided is very clear and admits of no question whatever. In the Amet case the defendant made and sold the reproducing mechanism or graphophone of the combination claimed in the patent. The sale was made not to a person who had purchased the combination of the patent from the patentee, but to a person who had purchased or who contemplated purchasing only the record of the combination from the patentee. *Therefore, the purchaser had not paid to the patentee the consideration or royalty for the use of the combination of the patent and not having acquired the combination of the patent by purchase from the patentee, he had no right*

whatever to make or to deal with the combination of the patent in any way whatever.

The Amet case is not the reverse of this case. Here the proposition is that defendant sells sound-records *to purchasers from complainants and their licensees of the combination* of the patent consisting of the reproducing mechanism *and the record.* In the Amet case *there was no purchaser of the combination from the patentee* and hence the reproducing mechanism made and sold by defendant was sold to a person who had acquired no right whatever to use the combination of the patent. It is hardly necessary to point out that the reproducing mechanism is the *permanent* part, both of the graphophone of the Amet case and of the gramophone of this case, and it is the reproducing mechanism of this case which contains the essence of the invention, to wit: the universal joint substituted for the discarded feed-screw of the prior art. If a purchaser of the combination from complainants and their licensees were to construct or purchase from another than complainants or their licensees the reproducing mechanism, he would be *reconstructing* the invention and not replacing a temporary part. When, however, a purchaser of the combination from complainants and their licensees replaces the record which is essentially a *temporary* part of the combination and which is changed practically every time the machine is put to use, and which is perishable in its nature soon becomes old, broken or worn out by use, the purchaser does the very thing which complainants intended he should do when they constructed the combination and sold the combination to him. The contention of complainants, therefore, comes to this, that in order to continue the purchased combination in use, the purchaser must continue to purchase from complainants the unpatented and temporary part of the combination, namely,

the sound-record. In other words, complainants assert that they have a monopoly in the unpatented article. It is confidently asserted that such contention is erroneous and in direct conflict with every adjudicated case.

POINT FOUR.

Complainants and their licensees having sold the combination of the patent to purchasers without restriction as to the records to be used to replace those purchased, it is well settled law that defendant has the right to sell records to such purchasers for use in replacing records purchased with machines from complainants and their licensees.

(See assignment of errors, No. 16, *supra*, p. 36.)

In *Heaton Co.* v. *Eureka Co.*, 77 Fed. 288, the Circuit Court of Appeals for the Sixth Circuit considered this question. It was held that the owner of a patent for a machine for fastening buttons to shoes with metallic fasteners could sell such machines, subject to a condition or restriction that they should be used only with fasteners manufactured by the seller. Judge Lurton, writing the opinion of the court, pointed out (p. 300) that the distinction between such a case and the Morgan Envelope Company case (152 U. S., 425), and the case of Wilson v. Simpson (9 How., 109), discussed *supra* under Point One, consists in the *restriction* under which the patented machines for fastening buttons were *sold*. Referring to the Morgan Envelope Company case Judge Lurton said (p. 300):—

"the sale of the machine involved and implied

the right of use of the material with which it was to be combined; and this is shown by the case of Wilson v. Simpson, 9 How. 109, which is cited by Mr. Justice Brown as a case sustaining his conclusion. That case was a suit for infringement against the purchaser of a patent machine for planing wood, in which there were claims for the combination between the rest of the machine and certain knives necessary to its operation. The alleged infringer had made or bought knives to replace the knives in the machine which had worn out, and which it was shown must necessarily wear out and be renewed long before the main body of the machine would wear out. *It is held that the conveyance of the machine itself, with the knives in it, implied the right on the part of the purchaser to renew or replace the knives necessary for the enjoyment and use of the whole machine during its natural life.* Thus, with respect to the paper holder, the supreme court, in effect, held that the sale of the paper fastener with the paper in it contained the implication of a right to renew the paper when that paper sold should be exhausted, and *did not require the purchase of the paper from the original patentee*, the paper itself not being patented. In the case at bar the purchaser expressly agreed, by contract, that his right to use the machine should not extend beyond its use with staple fasteners furnished by the patentee, and this makes the broad distinction between the Morgan Envelope Co. Case and the case at bar."

In *Rupp* v. *Elliott*, 131 Fed., 730 and *Tubular Co.* v. *O'Brien*, 93 Fed., 200, the Heaton Co. Case was followed. But in *Cortelyou* v. *Johnson & Co.*, 145 Fed. 933 (C. C. A.) this court pointed out the limitations which should be imposed upon it. In *Edison Elec. Light Co.* v. *Peninsular Co.*, 101 Fed., 831, the same court that decided the Heaton Co. case held, however, that the purchaser from a patentee of an electrical

lighting plant is not obliged to continue to take the electrical current from the patentee. Judge Lurton, writing the opinion of the court, said (p. 837);—

> "If it was intended that so expensive an apparatus could be utilized according to the methods of the patents under which the vendor was operating only so long as the vendor should supply the current, good faith required that the vendees should be plainly so informed. It cannot be doubted but that the vendees understood they were securing a permanent wiring system, which might be used in combination with a current obtained from any source, delivered to the house wires in such manner as to utilize them to the best advantage. *It would be most unreasonable to suppose that in order to continue the use of this, the very essence of the Edison inventions, they must continue to take current from a particular source.*"

It appears from both the moving and opposing affidavits upon this motion that complainants and their licensees have sold the machines and records forming the combination of the claims in suit without any restriction whatever as to the right of the purchaser to replace the records by records purchased from others (con. rec. aff. E. F. Leeds, p. 61, fols. 181-184; L. H. Bunker, p. 90, fols. 229-230; L. Moeller, p. 99, fols. 257-259; see also moving affidavits of Middleton, p. 37, fol. 109, and Haddon, p. 40, fols. 119-120.)

POINT FIVE.

Defendant's disc sound-records are unpatented articles of commerce of the prior art, which defendant could legally sell for use in the United States on mechanical feed-device machines, for export to foreign countries and for other lawful purposes. There is no authority holding a party liable as an infringer solely because an article sold by him, might be, or was, in fact, used by the purchaser as one element of a patented combination. The tendency of the later decisions is to do away with unwarrantable restrictions upon trade.

(See assignment of errors, Nos. 5, 11, 12, 17, 20, *supra*, p. 36).

It has already been shown that defendant's disc sound-records are unpatented articles of commerce of the prior art (*supra*, p. 28); that defendant's disc sound-records were originally used and have continuously been used upon mechanical feed-device machines of the prior art from the invention of the phonograph in 1877 down to the present day (*supra*, p. 31); that large quantities of defendant's disc sound-records have been sold by defendant for export and have been exported to foreign countries (*supra*, p. 36); and that defendant's disc sound-records are adapted to replace the old, broken and worn out records of the sound reproducing apparatus of the patent in suit (*supra*, p. 16). It cannot, under any circumstances, be argued that the unpatented sound-records made and sold by defend-

ant cannot legitimately be used for any one or more of the above-stated purposes.

A careful reading of the cases wherein contributory infringement has been found, will show that in each case stress had been laid upon the fact that the article made and sold by the defendant, held to be a contributory infringer, was adapted for use *only* in the patented combination, or upon affirmative proof of a concert of action between two infringers acting without legal right.

In *Bullock Co.* v. *Westinghouse Co.*, 129 Fed. 105, 111 (C.C.A.) the judgment of the Circuit Court finding defendant in contempt of the preliminary injunction was reversed. The Circuit Court of Appeals held that if the article sold be adapted to other uses than use as an element of the patented combination, "the intention to assist in infringement must be otherwise shown affirmatively," and that;—

> "The finding that the intent and purpose in making and selling this motor was that it should be used in the patented device in Canada, is a finding against any infringing purpose. It would not be an infringement to put the motor to the use intended because that use was beyond the protection of the patent. *The defense is as complete as if the intent had been to furnish the motor to one having a license to make, sell and use.* In neither case would there be an intent to assist in an infringement, and *without such intent* the plaintiff in error was not infringing the patents or disobeying the order of the court.
>
> "What we have said applies as well to the *method patent* as to the *combination claims.* There must be shown an intent *to assist another in an infringing use* of the patented method. There being no intent to provide means by which another might *unlawfully* use the Tesla method, there is no contributory infringement.
>
> "The judgment, for these reasons, must be

reversed, with directions to discharge the rule to show cause."

From the decision in the Bullock case, it is clear that defendant has *the legal right to sell its sound-records for export to foreign countries for use in the foreign countries upon sound reproducing machines of all kinds.* Such right, says the court, is as complete as the right to sell to one who has a license to use. The purchaser of the patented combination from complainants unquestionably has the right unconditionally to *use* the patented combination and to replace the record thereof in order to continue the use of the combination.

In *Cortelyou* v. *Johnson & Co.*, 145 Fed. 933 (C.C.A.), this court, refusing to enforce a restriction under which a patented article was sold by the patentee, held that unwarrantable restrictions upon trade should not be created or upheld, and explained the doctrine of contributory infringement as follows (pp. 934-935):

> "The doctrine originated in a desire to secure to a patentee complete protection in all the rights granted him by the patent, but it was confined to those rights; it went no farther. One who sold an element of a patented combination, *which could not be used except in an infringing combination or device*, was not permitted to reap the benefits of such sale. He did not himself directly infringe, but he promoted the infringement of others by putting in their hands a device *which could only be used in violation of the patent.* When confined to articles, whether covered by the patent or not, which are made for the express purpose of inducing infringement and are not intended *for any legitimate use*, the doctrine of contributory infringement is logical, just and salutary."

The holding of this Court in the *Cortelyou* case, that unwarrantable restrictions and intolerable

burdens should not be put upon trade, is in line with Judge Wallace's opinion in *Thomson-Houston El. Co. v. Kelsey Co.*, 75 Fed. 1005 (*supra* p. 60), and of the Supreme Court in the *Morgan Envelope Co.* case (*supra*, p. 54).

In *Snyder* v. *Bunnell*, 29 Fed. 47, 48, Judge Coxe, reviewed the authorities upon the question of contributory infringement and said:—

> "In each of these cases the complainant succeeded because the article dealt in by the defendant *was only useful when combined as provided by the patent* in question, and was sold by him intending that it should be put to this unlawful use. A careful examination has failed to discover an authority holding a party liable as an infringer solely because an article sold by him *might be used by the purchaser as one element of a patent combination*. Such a doctrine would be too dangerous to be upheld."

In the case at bar the learned Circuit Judge held defendant in contempt for selling the unpatented records of the prior art which were capable of use, and had continuously been used, upon mechanical feed-device machines; and, though conceding that the records were frequently purchased as substitutes for worn out discs, he ignored this fact and held that such substitution was not a repair because the records were bought *more* frequently in order to increase the repertory of tunes.

There was no proof whatever, as shown in the following point (p.), of the purpose for which defendant's records were bought by the purchasers and sold by defendant and there was, therefore, no basis of fact upon which to hold defendant in contempt even under the interpretation of the law stated by the learned Circuit Judge in his opinion.

This decision of Judge Coxe in the *Snyder* case is well settled law. In *Thomson-Houston Co.* v.

Ohio Co., 80 Fed. 712 (C.C.A.), which complainants' counsel largely quoted in the court below, omitting those parts, however, which support defendant's contention, the Circuit Court of Appeals said (p. 723);—

> "Of course, such an inference could not be drawn had the articles, the sale or offering of which was the subject of complaint, *been adapted to other uses than in the patented combination.* In the latter case the intention to assist in infringement must be otherwise affirmatively shown, and *cannot be inferred from the mere fact that the articles are in fact used in the patented combinations or may be so used.*"

In *Standard Co.* v. *Computing Co.*, 126 Fed., 639 (C.C.A.), the same court said (p. 653);—

> "Testimony was introduced by the appellant which it claims is to the effect that it does not make any adjustment itself, but makes and sells its scales with provision for such adjustment as the purchaser sees fit to make, and we are not referred to any evidence conflicting with this. Of course, if it made or sold scales having peculiar provision for the intended incorporation therein of a valid patented device of the appellee, it would be liable as a contributory, if the expected incorporation should thereafter be made by another. *But if it makes or sells scales having simply adaptations for a proper adjustment, such as was known in the art, it would not be liable if another person should of his own volition put into the scales a form of adjustment patented by the appellee.*"

Again in *Canda* v. *Michigan Co.*, 124 Fed. 486 (C.C.A.) the same court said (p. 489):—

> "The case is not like one where the thing made is also adapted to use in other ways. It would be wholly inadmissible to shut out the manufacture or sale of those things adapted

to a proper and lawful use. That would interfere with the rights and priveleges of the public."

Of course, these cases recognize the rule that where two persons knowingly co-operate to infringe a patented combination, they are guilty of contributory infringement, but it is clear from the decisions quoted that any one has a right to manufacture, sell and use an unpatented article, and the mere fact that that article may be used or is, in fact, used in the patented combination, is not sufficient ground upon which to hold the vendor guilty of contributory infringement. This would interfere with the rights and privileges of the public.

POINT SIX.

Complainants and their licencees, by selling the sound reproducing apparatus of claim 35 of the patent in suit, impliedly licensed the purchaser thereof to combine a suitable record therewith, in every case where the apparatus was sold without a sound-record combined therewith, and for that purpose to purchase such a record from persons other than complainants or their licensees.

This proposition is raised by assignment of error No. 22 (*supra*, p. 36), which reads as follows;—

"22. In not holding that complainants and their licensees, by the selling of the elements, other than the record, of claim 35 of the patent in suit, impliedly licensed the purchaser thereof to combine a suitable record

> with such purchased elements, and for that purpose to purchase such a record from persons other than cor plainants or their licensees."

It is to be observed that it is not necessary for defendant to establish this proposition in order to secure a reversal of the judgment or decree finding defendant in contempt; because the finding of the Circuit Court was that defendant had violated the injunction solely by selling records for use on machines which complainants and their licensees had sold *combined with records*. It is clear, however, that if the above proposition be correct, and under the authorities hereafter cited it is submitted that it is correct, the judgment or decree finding defendant in contempt must be reversed.

In *Morgan Envelope Co.* v. *Albany Paper Co.*, 152 U. S., 425, 432, (considered *supra* under Point One, p. 54), the Supreme Court said;—

> "The real question in this case is, whether, *conceding the combination of the oval roll with the fixtures to be a valid combination*, the sale of *one element* of such combination, with the *intent* that it shall be used with the *other element*, is an infringement. *We are of the opinion that it is not.*"

The cases involving contributory infringement, the Supreme Court, continuing, said (p 432);—

> "have no application to one where the element made by the alleged infringer is an article of manufacture, *perishable in its nature*, which it is the object of the mechanism to deliver, and *which must be renewed periodically, whenever the device is put to use.*"

If a log were an element of a patentable mechanism for sawing such log, the purchaser of the sawing-device would not, said the Supreme Court, be obliged to buy his logs from the patentee. So

in the case at bar, since the sound record is a perishable, temporary element of the combination which must frequently be renewed at short intervals, whenever the sound reproducing apparatus is put into use, the object of the apparatus being to deliver the sound from the sound record, which is soon destroyed by the operation of the apparatus, the purchaser of the sound reproducing apparatus from the patentee is, for the same reason, under no obligation to purchase his sound-records from the patentee. Of course, if the sound-record itself were the subject of a valid patent, it would to use the words of the Supreme Court,

> "be an infringement of that patent to purchase such product of another than the patentee; but if the product (here the sound-record) be unpatentable, it is giving to the patentee of the machine the benefit of a patent upon the product, by requiring such product to be bought of him."

Judge Wallace, when deciding the Morgan Envelope Co. case in the Circuit Court, also said, as shown *supra* at p. 51;—

> "The sale of the paper to those who have a lawful right to use the *fixture*, and to use both the fixture and paper together, is not an invasion of the rights of the complainant."

This interpretation of the decision of the Supreme Court in the Morgan Envelope Company case is one which has been given by the courts.

In *Heaton Co.* v. *Eureka Co.*, 77 Fed., 288, 300 (C.C.A.) the court, referring to the Morgan Envelope Company case, said;—

> "The sale of the machine involved and implied the right of use of the material with which it was to be combined; and this is shown by the case of *Wilson* v. *Simpson*, 9 How. 109, which is cited by Mr. Justice Brown as a case sustaining his conclusion.

In *Edison El. Co.* v. *Peninsular Co.*, 101 Fed. 831, 836, (C.C.A.), the same court said;—

> "To restrict the right of a purchaser of an apparatus embodying a patented invention to use it for the purposes for which it is peculiarly adapted, there must appear some express or implied agreement by which the mode or time or place of use has been limited; and this was the principle upon which the Button-Fastener Case, cited above was decided. But there may be circumstances under which the sale by a patentee of one patented article will carry with it the right to use another in co-operation with the first, although the thing be covered by a second patent. *Thus, if the article sold be of such peculiar construction as that it is of no practical use unless it be used in combination with some subordinate part covered by another patent of the vendor, the right to use the latter in co-operation with the former might be implied from circumstances.* It is a general principal of law that a grant necessarily carries with it that without which the thing granted cannot be enjoyed."

Of course, the rule *here* contended for, under the Morgan Envelope Company case, applies only to the right of the purchaser to combine with the parts of the combination purchased from the patentee, an unpatented, perishable, temporary element of the combination necessary for the use and enjoyment of the parts purchased. It would not apply in a case where the purchaser had purchased from the patentee only the unpatented perishable, temporary element of the combination. The implication arising from the purchase of the *temporary* element would clearly be, as in the *Amet* and *Leeds* cases considered *supra* pp. , that the temporary element was to be used as a substitute for the same element in the patented combination in order to restore or otherwise continue the combination in use. From the purchase of a *tem-*

porary element, no implied right could be derived to construct the *permanent* elements constituting the durable parts of the combination. When, however, *a durable machine*, constituting the permanent part of a patented combination, is sold by the patentee, the purchaser necessarily acquires the right of combining with the purchased durable machine any element, such as a temporary, perishable element which must frequently be renewed, necessary for the use and enjoyment of the machine.

POINT SEVEN.

The finding of the Circuit Court places an intolerable burden upon defendant's conceded right to make and sell the unpatented sound-records of the prior art.

(See assignment of errors, Nos. 11, 17, *supra*, p. 36).

The learned Circuit Judge, in his opinion (con. rec. p. 111), says:—

> "No effort to restrict the use to which defendant's discs should be put by notice on their face or otherwise was made until after motion, and the affidavits are not as satisfying as they might be that such notice has since been affixed; and such notice might fairly go further and advise the purchasers that to use it on one of complainant's machines would make the user an infringer."

Since the Circuit Court found defendant in contempt for a violation of the preliminary injunction, defendant has sold its sound-records subject to the following restriction set forth upon a label affixed to each record:—

> "This record is sold for use on all mechanical feed-device machines and upon all licensed

> Victor, Columbia and Zonophone machines and all other machines licensed under U. S. patent No. 534,543 in replacement of any worn out or broken record thereof. Any other use of this record will be a violation of the conditions under which it is sold and an infringement."

The order partially staying the preliminary injunction, pending the decision of this court upon the writ of error, permits defendant to sell "disc sound-records for use in the United States upon machines sold by complainants and their licensees, together with disc sound-records" (con. rec. p. 116).

Clearly defendant's right to sell its disc sound-records subject to the restrictions set forth on the label above quoted is beyond question; and the defendant's right is broader than the restriction set forth on the label. The right granted by the stay is also broader than the restriction set forth on the label; and defendant's right is broader than the right granted by the stay. But *why*, it may be asked, should the learned Circuit Judge have held that defendant, in selling the unpatented sound-record of the prior art, was under *any* obligation to sell its sound-records subject to a *restriction* set forth upon a label affixed thereto? How *is* it that complainants, through the invention of an improved machine for use in reproducing sound from the records of the *prior* art, has acquired the right to compel all makers and sellers of records to affix labels to the records sold, restricting the right of use of the records? While it may be that a patentee may sell his patented article subject to a valid restriction as to the use thereof, and that a *purchaser*, who by contract with the patentee, agrees to observe the restriction and acquires the right to the patented article subject to the re-

striction, must use the purchased patented article only in accordance with the restriction under which he purchased it; it is an entirely different matter, constituting an intolerable burden on legitimate business to hold that *one not in privity with the patentee*, the maker and seller of an unpatented article of the prior art, adapted for a legitimate use, for many legitimate uses, or for any legitimate use other than a use in the patented combination, though even that use may be lawful, shall be obliged to deal in the article *at his peril*, merely because a patent has been issued for an improved apparatus designed for use in connection with the unpatented article of the prior art. Everybody has a right to make, to use and to sell a disc sound-record. Everybody has a right to purchase such a disc sound-record. Everybody has a right to *construct* or *to purchase a feed-device machine* or any machine other than the machine of the patent in suit, for use in connection with the disc-sound record. Why, then, is defendant not at liberty freely to sell its disc sound-records on the open market, without restriction and without inquiry as to the intended use thereof? The remarks of this court in *Cortelyou* v. *Johnson & Co.*, 145 Fed. 933, clearly indicate that the intolerable burdens and unwarrantable restrictions which are fettering commerce in unpatented articles will no longer be sanctioned or enforced by the courts. Privity with a wrong-doer is not to be inferred from the exercise of a legal right. The manufacture and sale of many articles is legal and does not become illegal because certain *uses* thereof are prohibited by law. To hold the seller of a drug guilty, because the purchaser commits an unlawful and prohibited act therewith, would be an absurdity. For the same reason there is no legal principle which prohibits defendant from making the un-

patented sound-record of the prior art and selling it on the open market without restriction and without inquiry as to the use which the purchaser intends to make of the purchased record.

In *Welsbach Light Co. v. Union Incandescent Light Co.*, 101 Fed. 131 (C.C.A.) this court affirmed the principle here contended for. That case involved a patent for a *process*. Infringers of the process sold the *product* to the defendant and the learned Circuit Judge (Judge Lacombe) enjoined the defendant (see, record on appeal, p. 71).

> (a) from the sale or use of the purchased product, except such as shall be *shown* to have been made by others *before* the entry of the order; and
>
> (b) from the sale or use of the product of the process, except as stated under (a), unless *shown* to have been made in a foreign country.

Judges Wallace and Shipman, in a per curiam opinion, held this to be error and said:

> "That part of the order appealed from restraining the defendant, during the pendency of the action, from selling any incandescent mantels, 'except such as shall be shown to have been coated by others,' can only be justified upon the theory that the patent for infringing which the suit was brought was a patent for a product or manufacture, and not one for a process. If it was a patent for a process, it would not be infringed by selling the product, and *no conditions should have been annexed to the exercise of the vendor's rights*. The broad proposition that the vendor of a product which has been made *in infringement* of a patented process is *an infringer, or liable to any extent to the patentee, is untenable* and does not require discussion. The patentee's remedy is against the manufacturer. *Merrill v. Yeomans*, 94 U. S. 568."

POINT EIGHT.

The question raised in the Court below upon the motion to punish defendant for contempt was an entirely new question. The act for which defendant was held to be in contempt was not included in the preliminary injunction or the decree therefor. Under such circumstances the motion should have been denied and complainants left to raise the question by appropriate proceedings other than a motion to punish for contempt.

(See assignment of errors, Nos. 2, 9, 10, 27, 28, 29, *supra*, p. 36).

The questions raised in the prior suit and upon the motion for preliminary injunction in this suit have been fully stated (*supra*, p. 3). The preliminary injunction has also been set forth (*supra*, p. 12). Defendant was enjoined from *manufacturing*, *selling* and *using*, or in any way *disposing* of the *apparatus* or *devices* specified in claims 5 and 35 of the patent in suit, and from *using* or *employing* in any way the *method* specified in claim 5. Defendant was not enjoined from selling sound records; nor was defendant enjoined from selling sound-records with the intent that the same should be used "in machines (other than 'mechanical feed' machines) sold by complainants or their licensees combined with such records, for use in carrying out the method of claim 5." In the prior suit, and in this suit on the motion for preliminary injunction, the proof of sole infringement was that the defendant had sold and used a machine, combined with a record, neither of which had been made or sold by complainants or their

licensees. Such was the infringement charged and found by the courts and such was the infringing act enjoined. Neither in the prior suit, nor on the motion for preliminary injunction in this suit, was it charged or found that defendant infringed by selling sound records for use in machines sold by complainants or their licensees combined with records, nor was any evidence whatever introduced to show that the sound-record was or was not a perishable, temporary element of the combination of the patent in suit, or to show that the sound-reproducing apparatus of the patent in suit was or was not constructed with the intention that the record should frequently be replaced, or to show any of the other matters material for the determination of the question raised for the first time upon the motion to punish for contempt. As will be seen from the following cases, a motion for attachment for contempt is not adapted to the trial of a new question, and the law is well settled, that all such motions, depending upon the trial of a new question, should be denied.

In *Enterprise Co.* v. *Sargent*, 48 Fed., 453, 454, Judge Shipman said;—

> "Notwithstanding the character of the plaintiff's suggestions, it is true that this is a motion for contempt for violation of an injunction order, and that the former opinions of the court were not directed to the structure as now modified, and that, to a certain extent, a new question has arisen which requires the court to re-examine the self imposed limitations of the patent. *A motion for attachment for contempt is not adapted to the trial of a question of this kind.* I am therefore of opinion that the motion should be denied, but without prejudice to the plaintiff's right to file a supplemental bill in the original suit, which is still pending, or to file an original bill, as it may be advised. *Allis* v. *Stowell*, 15 Fed. Rep. 242; 3 Rob. Pat. 649."

The courts have upheld the principle above stated in such a variety of cases that a citation of a few only of them is all that is necessary;—*Bate* v. *Eastman*, 11 Fed., 902, (Blatchford, C. J.); *Allis* v. *Stowell*, 15 Fed., 242, 244, (Dyer, J.); *Temple Pump Co.* v. *Goss Co.*, 31 Fed., 292, (Blodgett, J.); *Truax* v. *Detweiller*, 46 Fed., 117, (Lacombe, C. J.); *Bonsack Mach. Co.* v. *National Co.*, 64 Fed., 858, (Lacombe, C. J.); *United States Co.* v. *Spalding*, 93 Fed., 822, (Wheeler, D. J.).

It should be observed, moreover, that in cases where contributory infringement has been found, the decrees of the courts have invariably been so framed as to show explicitly what the defendant was enjoined from doing and was permitted to do. An example of this is *Thomson-Houston Co.* v. *Kelsey*, 75 Fed. 1005 (C C.A.), cited and quoted *supra* under Point Two (p. 60), where Judge Townsend, having found contributory infringement of the combination claims of the patent, specifically enjoined the making or selling of the articles which contributed to the infringement of the combination claims of the patent, to wit, "*trolley bases devised or intended to be used in infringement*" (p. 1007). Thus the defendants were informed of the fact that they were enjoined and of what they were enjoined from doing and accordingly appealed to the Circuit Court of Appeals, with definite and specific assignments of error. The Circuit Court of Appeals held the injunction to be too broad and specifically modified the order so as to state explicitly that defendants were not enjoined "*against the sale of trolley stands by way of replacement of broken stands, or stands worn by use, or substitution for trolley stands previously sold by complainant to purchasers from it*" (p. 1010). In the case at bar, defendant appealed from the decree for preliminary injunction herein, but obviously defendant

did not, and could not on the said appeal, by any possibility whatever, make an assignment of error to the effect that the Circuit Court had erred in enjoining defendant from selling sound records for use on *machines sold by complainants or their licensees combined with records.* No such provision was contained in the decree.

It requires no citation of authority to show that an injunction must be clear and explicit. The defendant should know what it is he is enjoined from doing. "To sustain proceedings for contempt the order should be clear and certain in its terms" (Brown J., in *In re Cary*, 10 Fed. 622, 626 and cases cited). In the case at bar the act for which defendant has been held to be in contempt was a perfectly legal act and in no sense an infringement of the patent and was not, moreover, an act included, either expressly or by implication, in the injunction or decree therefor. For the reasons stated, and for each of them, the learned Circuit Judge erred in holding defendant in contempt.

POINT NINE.

Complainants presented no proof whatever that the sound-records sold by defendant were in a single instance used in any infringement of the claims in suit; no proof whatever that the sound-records sold by defendant were used for the reproduction of sound on any machine of any construction. The mere making and selling of an unpatented article is not an infringement of a claim for a combination of which that article is an element.

(See assignment of errors, Nos. 4, 5, 6, 11, 12, 14, 17, 19, 27, 28, 29, *supra*, p. 36).

The moving papers are entirely silent upon the question of any use whatever of the sound records purchased from defendant. In fact it would appear that they have never been used.

In *Standard Co.* v. *Computing Co.*, 126 Fed., 639 (C. C. A.), the court said (p. 653): —

> "Of course, if it made or sold scales having peculiar provision for the intended incorporation therein of a valid patented device of the appellee, it would be liable as a contributory, *if the expected incorporation should thereafter be made by another*. But if it makes or sells scales having simply adaptations for a proper adjustment, such as was known in the art, it would not be liable if another person should of its own volition put into the scales a form of adjustment patented by the appellee."

Referring to the moving affidavits, it appears from the affidavit of Luck (p. 16) that defendant continued to sell sound-records; of Hemen-

over (p. 19) that defendant continued to sell sound-records; of Platz (p. 21), a dealer in complainants' machines and records exclusively, that defendant continued to sell sound-records; of Bennett (p. 27) that defendant continued to sell sound-records and that Bennett possessed one of complainants' machines; and of Thompson (p. 30) that defendant continued to sell sound-records and that Thompson inquired whether defendant's records could be used "on a talking machine of the manufacture of the Victor Talking Machine Company." Waiving for the present the facts that both Bennett and Thompson were informed as to defendant's mechanical feed device machine (aff. Bunker, p. 87, fols. 222-224), and that Bennett and Thompson have not correctly or fully stated the conversations which they had with Mr. Bunker, who was not an employe of defendant (aff. Bunker, p. 87, fols. 222-224; p. 91, fols. 233-235) it appears from the two affidavits of Bennett (pp. 27, 32) and the affidavit of Thompson (p. 30) that neither of them indicated to Mr. Bunker *what sort of machine* they had in mind when they asked whether defendant's sound-record could be used "on a talking machine of the manufacture of the Victor Talking Machine Company" (p. 31, fol. 91; p. 33, fol. 97), and were informed by Mr. Bunker, not an employe of defendant, "that defendant's records could be played upon such mechanical feed device machine and other suitable machines" (p. 88, fol. 224; p. 91, fol. 234). Moreover, there is no suggestion in the affidavits or proofs throughout the record, that defendant's records were sold or purchased for the purpose of increasing the repertory of tunes of the purchaser rather than as substitutes for worn out discs; nor does the judgment or decree holding defendant in contempt make any such finding. The judg-

ment is that defendant violated the injunction in that it sold records for uses in machines (other than 'mechanical feed' machines) sold by complainants or their licensees *combined with such records*" (p. 113). Upon such evidence and such finding the learned Circuit Judge found defendant in contempt.

This was clear error.

POINT TEN.

The judgment or decree finding defendant in contempt should be reversed with costs, with directions to the Circuit Court to discharge the rule to show cause.

Respectfully submitted

LOUIS HICKS,

Counsel for plaintiff-in-error.

Supreme Court, U. S.
FILED.
JAN 6 1909
JAMES H. McKENNEY,
CLERK.

Supreme Court of the United States.

OCTOBER TERM, 1908

No. 81.

LEEDS & CATLIN COMPANY,

Petitioner,

against

VICTOR TALKING MACHINE COMPANY and UNITED STATES GRAMOPHONE COMPANY,

Respondents.

PETITIONER'S BRIEF IN CONTEMPT PROCEEDINGS.

LOUIS HICKS,
Counsel for petitioner,
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New York City.

On writ of certiorari to the United States Circuit Court of Appeals for the Second Circuit.

APPEAL PRINTING COMPANY, 32-34 VESEY STREET, NEW YORK.

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Supreme Court of the United States.

LEEDS & CATLIN COMPANY, Petitioner, vs. VICTOR TALKING MACHINE COMPANY and UNITED STATES GRAMOPHONE COMPANY, Respondents.	OCTOBER TERM, 1908. No. 81.

PETITIONER'S BRIEF.

Statement.

This cause comes here on writ of *certiorari* to the United States Circuit Court of Appeals for the Second Circuit.

At the time of the granting of the petition for writ of *certiorari* to review the *contempt proceedings* here involved, which petition was No. 743 of the October Term, 1906, this court also granted the petition for writ of *certiorari* to review, upon the merits, the *injunction proceedings* in the same suit, which petition was No. 742 of the October Term, 1906.

The record in the contempt proceedings here involved consists of two parts; first, the record in

the injunction proceedings, hereinafter referred to as "*inj. rec.*"; and, second, the subsequent contempt proceedings, hereinafter referred to as "*con. rec.*", in which defendant, the petitioner above named, was charged with a violation of the injunction, found guilty, and, by final judgment, ordered to pay a fine of $1,000, one-half to respondents, and one-half to the United States (con. rec., p. 75).

By stipulation (con. rec., p. 99), the printed record in the injunction proceedings, No. 307 of the October Term, 1907, and now No. 80 of the October Term, 1908, is to be used as part of the record in the contempt proceedings here involved, No. 308 of the October Term, 1907 and now No. 81 of the October Term, 1908, to avoid the unnecessary expense that would be incurred by printing again in the contempt proceedings the record printed in the injunction proceedings. Briefly the record in the contempt proceedings, No. 81, consists of the record in the injunction proceedings, No. 80, and the subsequent contempt proceedings printed in No. 81.

Succinct Statement of the Questions Here Involved and the Manner in Which They Are Raised.

The judgment or decree of the Circuit Court finding defendant in contempt (con. rec. p. 75) was affirmed by a divided court in the Circuit Court of Appeals, Hough, *D. J.*, with whom Coxe, *C. J.*, concurred, writing the opinion of the majority, and Wallace, *C. J.*, writing a dissenting opinion (con. rec. pp. 90-96). THE QUESTION OF PATENT LAW INVOLVED IS ONE OF GREAT IMPORTANCE AND, AS JUDGE WALLACE STATES IN HIS DISSENTING OPINION, THE RULE OF INFRINGEMENT ADOPTED BY THE MAJORITY OPINION "NOT ONLY EXTENDS THE MONOPOLY

OF THE PATENT TO AN UNPRECEDENTED EXTENT, BUT IS SUBVERSIVE OF THE RIGHT OF A PURCHASER OF THE PATENTED THING TO REALIZE ITS FAIR MEASURE OF USEFULNESS BY MAKING NECESSARY REPARATIONS OR CHANGES BY WAY OF IMPROVEMENT." The question of law raised by the facts is one of *general application and importance.*

Briefly stated, the question involved is this:

The petitioner manufactured and sold *disc sound-records.* The respondents manufactured and sold sound reproducing *machines combined* with such disc sound-records. The *combination* of the sound reproducing apparatus and the record was covered by claim 35 of the Berliner patent here in suit owned by respondents. *The sound-record was an unpatented article which had existed and been used in the prior art.* Respondents' sound reproducing machine was so constructed that it was *intended* that the record to be used thereon for the reproduction of sound could and should *frequently be replaced* and the sound-record was of such character that the destruction thereof was certain, within a very limited period of time, if the sound-record was used on the machine for the reproduction of sound. *The parts of the patented combination, other than the sound-record,* that is *the sound reproducing machine, would last indefinitely for years.* Respondents sold the *patented combination,* consisting of the sound reproducing machine *and* the sound-record, to purchasers *without restriction,* and, thereafter, *constantly,* sold new records to such purchasers to enable them to enjoy the machine and continue it in use. Petitioner sold sound-records *to persons who had purchased from respondents the patented combination* and the Circuit Court found that petitioner sold the sound-records to *such persons* with the intent that petitioner's sound-records should be used by

such persons with the other parts of the patented combination, the sound reproducing machine, which the respondents had sold to them, *combined with similar records.*

In its essence, the important question of law involved is *whether a person who has purchased a patented combination from the patentee has the right to replace an unpatented element of the combination and for such purpose to purchase such element from another than the patentee or his licensee.* The majority of the Circuit Court of Appeals has held that such replacement of the single unpatented element of the combination is *reconstruction* and not within the rights of the purchaser of the patented combination from the patentee. The error of this holding, it is respectfully submitted, clearly appears from the dissenting opinion of that very able and learned jurist, Judge Wallace, who wrote the opinion in the *Morgan Envelope Company* case in the Circuit Court (40 Fed., 577) with which this Court agreed (152 U. S., 425). Judge Wallace's opinion and the opinion of this Court in the *Morgan Envelope Company* case are considered at pages 70, 73 of this brief. The decision of this Court in *Wilson* v. *Simpson*, 9 How., 109 is hereafter set forth at page 77 and that of the Circuit Court of Appeals in *Goodyear Co.* v. *Jackson*, 112 Fed., 146, 150, at page 68. From these and other cases cited, it is clear that where an inventor so arranges the parts of his patented combination that the combination or machine cannot satisfactorily, successfully or usefully be continued in use, without the successive replacement of one of the elements thereof, the replacement of such an element, if unpatented, by the purchaser of the combination from the patentee is *in accordance with the intention of the patentee and not a reconstruction* of the patented combina-

tion, but an act within the rights of the purchaser. And this is so, as this Court held in *Wilson* v. *Simpson*, *supra*, even though the element replaced is "*an essential and distinct constituent of the principle or combination of the invention*" (see opinion quoted *infra*, p. 77). In the *Morgan Envelope Company* case this Court held, affirming Judge Wallace, that the purchaser of the patented combination there involved had the right to replace the paper of the patented combination so long as the fixture with which the paper was combined would endure, and that the replacement of the paper was not a reconstruction of the patented combination, but an act within the rights of the purchaser. In *Wilson* v. *Simpson*, this Court held that the replacement of the knives, the effective and essential tools, of a patented combination, constituting a planing machine, by the purchaser from the patentee, was not a reconstruction, but the doing of an act which the purchaser had a right to do in order to enjoy the use of his purchased machine. In the *Morgan Envelope Company* case this Court squarely held that to compel the purchaser of the patented combination to purchase the paper required for the use of the combination from the patentee would be to give to the patentee of the combination a monopoly of the unpatented paper.

The analogy between the unpatented paper of the patented combination of the *Morgan Envelope Company* case and the unpatented sound-record of the patented combination of the case at bar and between the machines proper thereof, is very clearly stated by Judge Wallace in the first paragraph of his dissenting opinion. Judge Wallace, referring to the sound record, said:

"Its relation to the machine proper is analogous to that of the sheet of paper in a typewriting machine or the stalks of corn in a corn cutter. *It*

is the thing which is operated on by the machine proper."

In the *Morgan Envelope Company* case this Court gave a similar illustration, saying (152 U. S., 425, 433);—

> "If a log were an element of a patentable mechanism for sawing such log, it would, upon the construction claimed by the plaintiff, require the purchaser of the sawing device to buy his logs of the patentee of the mechanism, or subject himself to a charge of infringement."

This Court rejected the construction claimed by the plaintiff in that case and held that, in all cases of patented combinations, *wherein a particular, unpatented element must be renewed periodically, whenever the patented combination constituting the device is put to use*, it would be giving to the patentee of the combination the benefit of a patent upon the *unpatented* element, by requiring such element to be bought of him.

Applying these principles, this Court said (p. 433);—

> "*In this view the distinction between repair and reconstruction becomes of no value, since the renewal of the paper is in a proper sense neither the one nor the other.*"

The fundamental error of the courts below in the case at bar (discussed *infra*, pp. 65, 83) resides in their failure to perceive that the renewal of such an element of a patented combination is neither repair nor reconstruction. This appears from Judge Hough's statement (con. rec. p. 92);—

> "*We perceive no substantial difference in the meaning of these words*" ("*replacement and repair*").

The renewal of the paper in the fixture, thereby renewing the patented combination, was the exer-

cise of the *right of replacement or substitution*, hereinafter considered, under the decisions of this Court at p. 86. Such right was acquired by the purchase of the patented combination, being necessarily implied in the sale and purchase. It was analogous to, yet not quite the same as, the replacement of the cutting-knives in the planing machine of *Wilson* v. *Simpson*. The principle evidently is that whenever a patented combination is sold and it is intended that one of the elements of the combination shall be "*periodically*" renewed, whenever the device is put to use, the purchaser has the right to renew that element and is not obliged to purchase that element, if unpatented, from the patentee of the combination, since otherwise the purchaser would be deprived of the reasonable use of his purchased machine.

In the case at bar complainants' sound reproducing apparatus operates upon the record, just as the saw operates upon the log. *In each case, when the operation of the machine is finished, the thing operated on, the record or the log, must be renewed.* It would be unreasonable to suppose that the operator must continue to saw the same log or to play the same record. Such was not the intention when the patented combination was sold and purchased. So it was with the toilet paper and with the cutting-knives. In order to enjoy the use of the purchased, patented machine, the purchaser had the legal right, according to the uniform decisions of this Court, periodically to renew any element, the renewal of which was necessary for the enjoyment of the machine when the machine was put to use.

Under Point Two, set forth at page 86 of this brief, the decisions of this Court are cited, holding that where a patentee sells his patented article, the article passes *out of the monopoly of the patent* and ceases to be under the protection of the

patent laws of the United States, and that a purchaser acquires the right to repair the purchased article or to improve upon it or to deal with it as he pleases without further payment of royalty or tribute to the patentee. Under these decisions, the Circuit Court of Appeals for the Second Circuit, in *Thomson-Houston Co.* v. *Kelsey Co.*, 75 Fed., 1005, considered *infra* at pages 80-90, held that the purchaser of a patented combination had the right, *immediately* upon his purchase, *to substitute* for a single element of the combination, purchased from the patentee, a similar element purchased from another than the patentee; and that this right existed irrespective of the reason why the purchaser desired to make the substitution.

The effect of the decision of the majority of the Circuit Court of Appeals is clearly to give to the respondents a monopoly of the manufacture, sale and use of an article which is unpatented and which was known and used in the prior art, and to deny to persons who purchased, *without restriction*, the patented combination from respondents the right to secure the unpatented sound records for use therein, unless, after having paid the full royalty for the patented combination, they pay a further royalty to respondents in purchase of the unpatented records from respondents. Such a decision, Judge Wallace points out, overrules the decision of the same Court in the "trolley stand" case (*Thomson-Houston Co.* v. *Kelsey Co.*, 75 Fed., 1005), wherein *the controlling decisions of this Court* were cited and followed, as shown under Point Two (p. 80) of this brief.

Decisions on the Patent in Suit.

The cause is a patent cause in equity. The patent in suit, No. 534,543 of Feb. 19, 1895, to Berliner for a Gramophone (inj. rec. p. 452) was sustained at final hearing by Judge Hazel in a prior

suit (*Victor T. M. Co.* v. *Amer. Gramophone Co.*, 140 Fed. 860) and the decree was affirmed on appeal, upon Judge Hazel's opinion, except as to the question of prior use (145 Fed. 350). Thereupon a motion for injunction was made against this defendant and granted by Judge Townsend (146 Fed. 534). The injunction was stayed pending appeal (inj. rec. p. 330) and the decree for injunction was affirmed on appeal (148 Fed. 1022).

Subsequently this Court granted a writ of certiorari to review the decree for injunction (206 U. S. 563) and, thereafter, denied respondents' motion to increase the bond filed by petitioner when the injunction was stayed pending appeal (U. S.).

The Preliminary Injunction and Decree Therefor.

The preliminary injunction (con. rec. p. 9), which followed the decree therefor (inj. rec. p. 328), read as follows:

> "Now, therefore, we strictly command and enjoin you, the said Leeds & Catlin Company, and your associates, servants, clerks, agents and workmen, and each and every one of you, from *manufacturing*, *using*, or *selling*, until further order of this court, *sound reproducing apparatus or devices embodying the subject matter of claim 35* of the letters patent in suit, which claim reads as follows, namely:
>
> > '35. In a sound reproducing apparatus consisting of a travelling tablet having a sound record formed thereon and a reproducing stylus shaped for engagement with said record and free to be vibrated and propelled by the same, substantially as described.'
>
> and from *manufacturing*, *using* or *selling*, or in any way *disposing of apparatus or devices which embody the method specified in*

claim 5 of letters patent in suit, which claim reads as follows, namely:

> '5. The method of reproducing sounds from a record of the same which consists in vibrating a stylus and propelling the same along the record by and in accordance with the said record, substantially as described.'

and from using or employing in any way the method specified in said claim 5."

Upon the settlement of the above decree for preliminary injunction, complainants' counsel presented an order (con. rec. pp. 71-72) containing a provision restraining defendant from "manufacturing, using or selling or in any way disposing of apparatus or devices" "*which is intended to be operated in accordance with said method claim* 5." This order, however, was *not* signed by Judge Townsend (con. rec. p. 69) and such provision is not contained in the preliminary injunction or decree therefor.

The Infringement Found in the Prior Suit and on the Motion for Preliminary Injunction in this Suit.

In the prior suit, as stated by Judge Hazel (140 Fed. 860, 866), infringement was not controverted, nor was it, by reason of the decision in the prior suit, open to defendant to controvert it upon the motion for preliminary injunction in this suit. In both suits the validity of the patent was attacked. There was, therefore, no expression of opinion whatever by the Courts as to what constitutes an infringement of claims 5 and 35 of the patent suit. It is necessary, therefore, to refer to the records in order to ascertain what the proof of infringement was in each suit. The evidence shows (aff. Hicks, con. rec. p. 68), that in the prior suit of

these complainants against the American Graphophone Company (140 Fed. 860, affirmed 145 Fed. 350);—

> "The proof of infringement by the American Graphophone Company in that suit rested upon the following stipulation, which is to be found at page 15 of the record on appeal in that suit:
>
> > 'It is stipulated between counsel that the foregoing exhibits marked respectively 'Complaints' Exhibit, Defendant's Machine,' and 'Complainants' Exhibit, Defendant's Sound Record' were made by the defendant and sold within the Southern District of New York subsequent to the date of the patent in suit and prior to suit brought and that the said record exhibit was made for use upon the said machine exhibit and was so used.'
>
> "There was no other proof of infringement, and the proof of infringement in that suit, therefore, is confined to the manufacture, sale and use by the American Graphophone Company of the invention of claims 5 and 35 of the patent in suit as embodied in the said exhibits."

Referring to the proof of infringement in the prior suit, Mr. Leeds, in his affidavit, says (con. rec. p. 30);—

> "In the prior suit against the American Graphophone Company, as appears from the record in said suit, the infringement charged was based upon a stipulation between counsel for complainants and defendants in that suit that defendant had made and sold a machine and a sound record which were offered in evidence, and that the said record exhibit was made for use upon the said machine and was so used. The proof, therefore, was under the stipulation that the defendant in that suit made, sold and used *all the elements* covered by claims 5 and 35 of the patent in suit and in-

fringement was accordingly found. The right to make and sell sound records independently of the machines was in no way litigated in the prior suit, and was not passed upon by the courts in the prior suit."

Referring to the proof of infringement upon the motion for preliminary injunction in this suit, Mr. Leeds, in his affidavit, says (con. rec. p. 30);—

> "Upon the motion for preliminary injunction in this suit, the infringement alleged was that defendant had sold a sound reproducing machine, known as the Ohio Talk-o-phone, together with disc sound records. The sound reproducing machine, or Talk-o-phone, was a machine not manufactured or sold by complainants or their licensees, and the *combination* of said machine and said sound records sold by defendant was held to be an infringement of claims 5 and 35 of the patent in suit, said holding being based upon the finding in the prior suit. The preliminary injunction and the decree, therefore, in this suit enjoins defendant from making, using or selling sound reproducing apparatus or devices embodying the subject matter of claims 5 and 35 of the patent in suit, and from using or employing in any way the method specified in said claim 5."

Upon the question of infringement in the prior suit and in this suit, the evidence further shows (aff. Hicks, con. rec. p. 69);—

> "Upon the motion for preliminary injunction in this suit, the sole proof of infringement consisted in affidavits alleging that defendant sold a machine known as the Ohio Talk-O-Phone, together with sound records for use thereon. Defendant admitted that in the settlement of an account with the Talk-O-Phone Company it had taken in part payment a few Talk-o-phones. Hence, in the prior suit, the question of infringement was

> confined to the making, using and selling by defendant of *machines and sound records* for use thereon, and in this suit the question of infringement was confined to the selling by defendant of *machines not licensed by complainants, together with sound records*, for use thereon. In each case the *machines combined with the records* embodied the invention of claims 5 and 35 of the patent in suit, and did not operate by the aid of mechanical feed-devices of the prior art. *The questions which complainants seek to raise upon this motion were not adjudicated by the Courts, either in the prior suit or in this suit.*"

It is clear, therefore, that in the prior suit and in this suit the question here involved was in no way litigated or passed upon; that the finding of infringement, which was not controverted in either suit, rested upon proof of the making, using and selling of sound reproducing apparatus, containing *all* of the elements of claim 35 and operating according to the method of claim 5, which machine and record had not been made or sold or licensed by complainants or their licensees.

The attempt of complainants to misstate the scope of the decision in the prior suit met with the most severe condemnation by Judge Hazel (145 Fed. 188). In the prior suit, immediately after the entry of Judge Hazel's final decree, complainants sent a misleading circular to the trade dated October 28, 1905. In that circular it was stated that Judge Hazel's decision placed the Victor Company "in control of the disc situation," and, in addition, complainants said in the circular,

> "but all dealers who continue to handle infringing machines and records we shall unquestionably hold liable."

Thereupon the American Graphophone Com-

pany moved before Judge Hazel to compel complainants to recall the circular, and Mr. Lyle in his affidavit in support of the motion, said;—

> "In the second place, since the suit relates to disc talking machines and *not to disc records*, since all goods are licensed in any event, and since the operation of the decree has been suspended by order of the court—we should not be called upon to rectify the wanton injury."

The opposing affidavit of Mr. Douglas of the Victor Company made no denial of the statement that the suit related to disc talking machines and *not to disc records*. Judge Hazel, though denying the motion to compel the complainant to recall its original circular or give the relief sought, because doubtful upon the question of jurisdiction, said (145 Fed. 188);—

> "*The asserted good faith of the complainant is not entirely beyond question.* * * * This is shown by its omission to state in the circular that *the defendant had the legal right to sell the records*, and by its precipitancy in publishing or advertising the decision of the Court. * * * The circular may not have been false or fraudulent, and counsel's interpretation of the opinion may not be inaccurate; but knowing that the case would be reviewed on appeal. * * *"

That case was No. 8627 in the Circuit Court and the papers filed therein show the foregoing facts. The complainants' circular was artfully worded, and its good faith was not beyond question. "*The defendant had the legal right to sell the records.*" In their circular complainants spoke of "infringing machines and records" which Judge Hazel said may not have been a false and fraudulent statement, and may not have been inaccurate. Clearly, in Judge Hazel's opinion, the statement

was misleading and the bad faith of complainants apparent. *The decision sustaining the patent upheld the combination only of the record with the reproducing machine.* This was the extent of the adjudications by the courts upon the questions first presented for decision upon the motion to punish this defendant for contempt.

In an attempt to explain away the clear intimation made by Judge Hazel (145 Fed. 188), that complainants' misleading circular with reference to Judge Hazel's decision in the prior suit on the patent here involved, not only indicated the bad faith of complainants, but was also false and fraudulent, complainants' counsel in his reply brief in the Circuit Court argued that when Judge Hazel said that "*the defendant had the legal right to sell the records*" he made the statement inadvertently and meant to say machines and records, notwithstanding the affirmative contention of the American Graphophone Company made in Mr. Lyle's affidavit that the suit was one relating "to disc talking machines and *not to disc records.*" Whatever else may be said in regard to Judge Hazel's opinion upon the motion based upon complainants' misleading circular, *this fact is clear;* that Judge Hazel did *not* say that the making and selling of records was *not* the legal right of the defendant or was within the scope of the injunction granted in the case. It took one hundred and twenty-five pages or more of argument on the part of complainants' counsel in each of the Courts below to attempt to show that defendant has not the right to sell sound records. This fact is in itself convincing proof that no court had ever held that defendant had not the right to sell sound-records for use "in machines (other than 'mechanical feed' machines) *sold by complainants or their licensees, combined with such records*" (com. rec. p. 75), the

act, and the *only* act, for which defendant was held to have violated the injunction.

The Vital Element of the Claims 5 and 35, in Suit, is the Universal Joint or Swinging Arm. Everything Else Was Concededly Old.

Claim 35 covers the Edison-Suess *sound reproducing apparatus*, shown in Fig. 3 of the patent in suit (inj. rec. p. 454). Claim 5 covers the *method* by which sounds are reproduced from a sound-record by means of such an apparatus. The *vital element* of the alleged invention resides in the *universal joint* 87 or *swinging arm* 88 (Fig. 3, inj. rec. p. 454) whereby the stylus is "free to be *propelled*" by the record.

The sound record, mentioned in the claims, existed before the date of the invention of the patent in suit, as hereinafter shown, and had concededly been used for the reproduction of sound by means of "*mechanical feed*" sound reproducing apparatus, wherein the stylus was kept free to be vibrated and propelled along the record, by and in accordance with the record, by reason of the movement of the stylus-carrying arm across the rotating record or the movement of the rotating record across the point of the stylus. This is conceded by complainants' expert, Mr. Kennedy (inj. rec. p. 58, fol. 172).

Such use, in the prior art, of the disc sound record, of lateral undulations and even depth, appears clearly from Fig. 8 of Berliner's prior *expired* British patent No. 15,232 of Nov. 8, 1887 (inj. rec. p. 526); also from Fig. 1 of Berliner's corresponding home patent, No. 564,586 of July 28, 1896 (inj. rec. p. 463) which *expired* Nov. 8, 1901, with the said prior British patent. The illustration, Fig. 1, of the article in the Electrical

World for Nov. 12, 1887 (inj. rec. p. 243), shows the same disc sound record with lateral undulations of even depth, illustrated also in Fig. 2 thereof, employed for the reproduction of sound by means of the "mechanical feed" or feed-screw machine; while the illustration of the article on "The Improved Berliner Gramophone" in the Electrical World for Aug. 18, 1888 (inj. rec. p. 274), shows the same sound record used for reproduction of sound upon the Suess machine embodying the alleged invention of the patent in suit, in which the stylus, by means of the Edison-Suess, pivoted and freely-swinging arm, is free to be propelled across the face of the record by the record.

Expired Berliner home patents, No. 372,786 of Nov. 8, 1887, applied for May 4, 1887 (inj. rec. p. 416) and No. 382,790 of May 15, 1888 (inj. rec. p. 434), describe and claim the making of cylindrical and disc sound records having lateral undulations of even depth and Fig. 1 of the former shows the use of such sound records upon a "mechanical feed" machine. The expired, prior, Berliner, English patent No. 15,232 of Nov. 8, 1887 claims the sound-record of lateral undulations and even depth as a product (inj. rec. p. 525, claim 15) and Figs. 1 and 8 thereof show such records in the form of a cylinder and a disc employed for the reproduction of sound by the aid of a stylus moving across the face of the record as it travels in and along the revolving, spiral record groove. The corresponding, expired, Berliner, German patent, No. 45,048 of Nov. 8, 1887 (inj. rec. p. 132) shows the same.

The essence of the alleged invention, the vital element, of the claims 5 and 35 in suit, resides, therefore, in the mounting of the stylus upon the Edison-Suess pivoted, freely-swinging arm, forming a universal joint, so that it is free to be propelled by the record; it does *not* reside in the record. Upon the oral argument of the appeal in the

prior suit, the Circuit Court of Appeals remarked that *the alleged invention consisted in discarding the feed-screw of the prior art.*

Judge Hough was of the same opinion, saying (con. rec. p. 90) that the feature of the invention here important depends upon the record groove compelling the movement of the stylus across the face of the record, and that (p. 91);—

> "the travelling tablet,—sound record or disc record, is an *unpatented* article."

In the suit at bar in the Circuit Court of Appeals, Judge Wallace, after remarking that claim 5 was void on its face, said, with reference to claim 35, as construed in the prior suit (con. rec. p. 94);—

> "The invention of the claim consisted in substituting a universal joint, or swinging arm, in lieu of a feed screw device * * *; *everything else in the machine was old.* This clearly appears by the opinion in the suit in which the validity of the patent was established. *Victor Talking Machine Co. v. American Graphophone Co.* 140 F. R. 860."

Thus before Berliner made the alleged invention of the patent in suit, he employed "mechanical feed" machines to reproduce sounds from *disc sound records of lateral undulations and uniform depth.* The operation of such feed machines of the prior art, in reproducing sounds from such disc records, was in every respect *identical* with the operation of the machines of the patent in suit. In each case the stylus vibrated laterally, in accordance with the lateral undulations of the record groove, and in each case *the disc sound record, of lateral undulations and uniform depth, was the same.* In each case the walls of the revolving, spiral record-groove caused the stylus to vibrate and at the same time "*forced*" the vibrating stylus to follow along and across the groove of

the record, the freedom of the stylus to be thus propelled along and across the groove being obtained by employment of known, equivalent means, consisting either of an arm carrying the stylus and moved by feed-mechanism across the vibrating record-tablet or of the same arm pivoted at one end. This has been fully shown under Point Three (p. 65) of petitioner's brief in case No. 80.

Long before Berliner employed his feed-device gramophone of the prior art, the Edison phonograph (inj. rec. p. 484, Figs. 1-11; p. 336, par. 4; p. 346, Fig. 1) and the Bell and Tainter graphophone (inj. rec., p. 387, Fig. 1, etc.; p. 443, lines 7-15) of the prior art also employed feed-screws to enable the *recording* stylus to record a spiral record-groove and the same feed-device phonographs and graphophones were employed for reproducing sound from the recorded, spiral record-grooves since the feed-mechanism did not prevent the spiral, record-groove from vibrating the reproducing stylus and propelling it along and across the record-groove.

Judge Hazel, in the prior suit, attempted to distinguish the principle of the Berliner machine of the claims, 5 and 35, in suit, from the Bell & Tainter graphophone as follows (140 Fed. 863);

> "The principle of operation in the Berliner machine is thought to be essentially different from that of the machine of Bell & Tainter. In the latter an auxiliary joint or feed screw was necessary, as already stated, to effectuate the required passage of the record over the point of the stylus, or to cause the stylus and reproducer diaphragm to travel across the surface of the record. In complainants' patent, on the other hand, it is shown that the lateral vibrations of the stylus point, and the propelling of the same over the surface of the record without mechanical assistance, and through the means of the groove alone, was the primary object of the inventor."

As pointed out under Point Four (p. 80) of petitioner's brief in this Court upon the injunction branch of this suit (No. 80), Judge Hazel overlooked the fact that the Bell & Tainter sound-*reproducing* machine operated upon precisely the same principle as the Berliner sound-reproducing machine here under consideration and that the distinction stated by him is merely one which has always existed, and still exists, between a sound-*recording* and a sound-*reproducing* machine. As shown under Point Three (p. 65) of petitioner's said brief, Edison in Figs. 34 and 37, as well as in Figs. 1, 2 and 11, of his British patent No. 1644 of 1878 (inj. rec. pp. 486, 484) disclosed the mode of operation of the Berliner sound-reproducing machine of claims 5 and 35 in suit. He also disclosed the mode of operation of all sound-recording and of all sound-reproducing machines. Judge Hazel also said in the prior suit (140 Fed. 861);—

> "At the date of the invention in suit it was not new to record sound and articulated words and *reproduce the same by suitable mechanical means.*"

The Several Elements of the Sound Reproducing Apparatus of the Claims 5 and 35 in Suit. The Combination of Claim 35 is Composed of More Than Two Elements.

The sound reproducing apparatus of the patent in suit is described in claim 35 as follows;—

> "35. In *a sound reproducing apparatus* consisting of *a traveling tablet* having *a sound record* formed thereon and *a reproducing stylus* shaped for engagement with said record and *free* to be *vibrated* and *propelled* by the same, substantially as described."

It has been shown under Point One, p. 45, of

petitioner's brief in this Court upon the injunction branch of this suit, No. 80, that both claims 5 and 35 of the patent in suit are *void* because they are claims for the *functions* of a machine. The vicious character of the claims clearly appears when an attempt is made to analyze the elements of claim 35. As shown at pages 49 and 54-55 of petitioner's brief in case No. 80, the sole pretense of novelty in claim 35 rests upon the function of a stylus "*free to be propelled*" along the record, by and in accordance with the record.

The question is what are the elements of a "sound reproducing apparatus", consisting of a "*traveling*-tablet" and a reproducing stylus "*free* to be *vibrated* and *propelled?*" Clearly the elements of the sound reproducing apparatus are not set forth in the claims. In lieu of the elements we have the functions and it is only through an interpretation of the functions that we can arrive at the elements constituting the sound reproducing apparatus in question.

In the first place, "*a traveling-tablet*" consists, in the sound reproducing apparatus made and sold by complainants, of *the tablet* and *the complicated motor mechanism* necessary to make the tablet travel or rotate. It also consists of the *turn-table* upon which the record-tablet rests and with which the record-tablet travels or rotates.

In the second place, we have the stylus "*free to be vibrated.*" How is this function accomplished, that is, by what elements? According to the description of the patent, the stylus is carried at the end of *a leaf spring*, the leaf spring being twisted at one point so as to bring the edge of one portion at right angles to the face of the other portion, whereby the leaf spring is elastic in two directions. One end of the leaf spring is made fast to the *diaphragm casing*. The leaf spring presses

towards the diaphragm and is connected by a *pin* with the center of the *diaphragm*. By means of these elements a stylus is obtained that is "free to be vibrated" laterally.

In the third place, we have the stylus "*free to be propelled*" along the record, by and in accordance with the record. Here again we have a function and not a statement of the mechanism or elements by which the freedom of the stylus to be propelled is secured. As fully explained under Point Five, p. 96, of petitioner's brief in case No. 80, it is when we refer to Fig. 3 of the patent in suit to ascertain how it is that the stylus is "free to be propelled," that we learn that Berliner has founded the broad, functional claims, 5 and 35, not upon a device invented by him, but upon a device invented by Suess, an improver upon Edison. Whatever else Berliner did, he did not invent the pivoted, freely swinging arm, or arm connected to its support by a universal joint. But aside from this question of function and invention, the freedom of the stylus to be propelled along the record, by and in accordance with the record, in the sound reproducing machines made and sold by complainants is acquired by mounting the stylus upon *a pivoted, freely swinging arm connected with its support by a universal joint.*

In addition, complainants' sound reproducing machines and those of the patent in suit are provided with *the sound conveyor or horn*, with the *box* enclosing the motor mechanism, with the *sound-box*, consisting of a casing enclosing the diaphragm to which the stylus is attached, as above described, and with *various other parts* necessary to the construction, use and operation of the sound reproducing machine.

The motor mechanism and the box containing it, the pivoted, swinging arm and the reproducer or

sound-box carried by it, the turn-table, the horn or sound-conveyer, are all *permanent* parts, while the sound record is obviously a *temporary* element which is replaced every time that the apparatus is put to use. The contention of complainant's counsel that the sound reproducing apparatus made and sold by complainants, under claim 35 of the patent in suit, consists of *two* elements only, is obviously incorrect. The contention would be immaterial if it were correct, but obviously it is incorrect. *What complainants make and sell is a complicated, expensive, sound-reproducing machine consisting of a great number of parts so arranged that the machine, as a whole, can be used for a long and indefinite period of time to reproduce sound from records, which the purchaser must obtain, and is expected to obtain, from time to time in order that he may enjoy the use of the purchased, patented machine.*

The Decree for Contempt and the Single Finding Thereof.

The decree for contempt (con. rec. p. 75), to review which the cause is brought to this court by writ of *certiorari*, found that defendant company

> "has violated said order and writ of injunction of this Court, in that defendant, after said order and writ of injunction, sold the *records* of claim 35 of the patent in suit, No. 534,543 of February 19, 1895, to Berliner, with the intent that said records should be used in combination with the other elements of that claim in *machines* (other than 'mechanical feed' machines), *sold by complainants or their licensees, combined with such records*, for use in carrying out the method of claim 5."

A fine of $1,000, payable one-half to the United States and one-half to complainants, was by the

decree imposed upon the defendant company. An order staying the collection of the fine pending appeal was entered on the same day (con. rec. p. 114). Furthermore, an *order partially staying the preliminary injunction* and decree therefor was also entered on the same day (con. rec. p. 115),

> "in so far as the same have been construed by this Court on the motion for contempt to enjoin and restrain defendant from selling disc sound *records* for use in the United States upon *machines sold by complainants and their licensees, together with disc sound records.*"

The opinion of Judge Lacombe upon the motion for contempt is to be found at page 110 of the contempt record. From the order staying the collection of the fine and from the order partially staying the preliminary injunction and decree therefor, pending this appeal, by writ of error, it appears that Judge Lacombe entertained considerable doubt upon the question of law raised. From the order partially staying the preliminary injunction and decree therefor, it conclusively appears that in the opinion of Judge Lacombe the question raised upon the motion for contempt had not been passed upon by Judge Townsend when the decree for preliminary injunction was entered, or by the Circuit Court of Appeals when that decree was affirmed, and had not been pressed upon either by Judge Hazel or the Circuit Court of Appeals in the prior suit of these complainants against the American Graphophone Company, wherein the patent in suit was sustained at final hearing and infringement found. It will not be disputed by complainants' counsel that upon the settlement of the orders referred to, Judge Lacombe stated that seven judges out of ten would have denied complainants' motion for contempt; that the question presented was *a pure question of law*,

and that under the authorities great doubt existed upon the question of law, and that complainants were extremely fortunate in securing the decree for contempt, instead of being obliged to raise the question by appropriate proceedings other than a motion to punish for contempt. Judge Wallace's vigorous, dissenting opinion in the Circuit Court of Appeals and the granting of the writ of *certiorari* by this Court clearly indicate the necessity of a decision by this Court upon the important question of law involved.

It will be seen, from the part above quoted from the decree for contempt, that the violation of the order and writ of injunction found by the court, rests solely upon the alleged "*intent*" with which the records were sold, namely, the intent that the records should be used in combination with the other elements of claim 35 in machines (other than "mechanical feed" machines) *sold by complainants of their licensees combined with such records.*

There is *no finding* that the records sold by defendant company *were ever used* upon any machine of any kind for the reproduction of sound therefrom; and there is *no evidence* whatever to show that the records alleged to have been sold by defendant company in violation of the injunction *were ever used* upon any machine of any kind for the reproduction of sound therefrom.

The important point, however, is that the finding of contempt rests *exclusively* upon the sale by defendant company of records with the intent that such records should be used upon *machines* (other than "mechanical feed" machines) *sold by complainants or their licensees combined with such records.* In other words, the finding is that complainants and their licensees had sold the *complete combination* of claim 35, including the record, for use in carrying out the method of claim

5, and that defendant company had sold records to such purchasers of the complete combination from the complainants and their licensees, with the intent that the purchaser, who had *paid the consideration* or royalty to complainants or their licensees for the complete combination and who had thereby obtained title to *the complete combination released from the monopoly of the patent* and the laws of the United States, should use the records purchased from defendant company *to replace records* previously purchased as part of the complete combination from complainants and their licensees.

There is no finding that such purchasers of the complete combination from complainants and their licensees and of records from defendant company intended to use, or ever did use, the records purchased from defendant company for *an unlawful purpose*, unless the mere fact of the purchase of the record from defendant company for use in replacing the record in the complete combination purchased from complainants and their licensees is in itself an unlawful act, no matter what may have been the cause of the purchase. *In the absence of such evidence, under any view of the case, there was no proof of infringement and, therefore, no contempt* (*Shickle Co. v. St. Louis Co.*, 77 Fed. 739, 743, C. C. A.).

The Logical and Erroneous Effect of the Finding of the Decree for Contempt.

The logical and clear, but *erroneous*, effect of the finding of the Circuit Court is that *a purchaser of the complete combination of claim 35 of the patent in suit, sold by complainants and their licensees for use in carrying out the method of claim 5,*

commits an unlawful act and infringes those claims of the patent,

(a) If the record of the combination purchased from complainants and their licensees is *broken* and the purchaser obtains, from another than complainants or their licensees, a new record in order *to restore the combination.*

(b) If the record is *old or worn out by use* and the purchaser obtains, from another than complainants or their licensees, a new record in order *to restore the combination.*

(c) If the purchaser of the complete combination from complainants or their licensees desires *to improve upon* the combination so purchased, and for such purpose obtains, from another than complainants and their licensees, a new record *to replace the record* purchased as part of the complete combination from complainants or their licensees.

(d) If the purchaser of the complete combination from complainants or their licensees desires to *substitute a new record* for the record forming part of the complete combination purchased from complainants or their licensees, and for such purpose obtains a new record from another than complainants or their licensees.

(e) If a purchaser of the complete combination from complainants or their licensees desires *to have on hand new records in order to restore the combination* purchased from complainants or their licensees, when the record thereof has been *lost* or become *broken, old, worn out by use or for other reason unsatisfactory or useless,* and for such purpose purchases a new record from another than complainants or their licensees.

(f) If the purchaser of the complete combination from complainants or their licensees desires not to re-construct the patented combination but *to deal with it in the same man-*

ner as if dealing with property of any other kind, for the purpose of repairing it or improving upon it, and for such purpose obtains from another than complainants or their licensees a new record to replace the record of the combination purchased from complainants or their licensees.

The sound record is a temporary part of the combination forming the sound reproducing apparatus of the patent in suit and it is intended that the sound record shall frequently be replaced. The rest of the apparatus, except some forms of needles, is permanent in its nature and will last indefinitely for years.

The above statement is established by the evidence beyond the possibility of doubt or dispute. Indeed, a mere inspection of the sound reproducing apparatus and a consideration of the wear upon the record when the apparatus is used for the reproduction of sound, would alone be sufficient to establish this point. However, the testimony of the experts, not only of defendant, but also of complainants, shows that the point is undisputed. Judge Lacombe, in his opinion on the motion for contempt, found that new records are frequently bought "*as substitutes for worn out discs*" (con. rec. p. 74); but he held that because new records are "brought more frequently in order to increase the repertory of tunes than as substitutes for worn out discs," the substitution of new records "in machines (other than 'mechanical feed' machines) sold by complainants or their licensees combined with such records, for use in carrying out the method of claim 5," was not in any legitimate sense "repairs" (con. rec. p. 74), and was not within

the rights acquired by a purchaser, from complainants or their licensees, of the patented sound-reproducing apparatus. In this the learned Circuit Judge clearly erred. He conceded that the new records were frequently purchased as substitutes for worn out discs. *The right to substitute a new record for a worn out record is a matter so clear, as a proposition of law, that argument is unnecessary, under the authorities, to establish it.* This being true, the *fundamental principle* of defendant's contention is established; namely, the right of a purchaser of "machines (other than mechanical feed" machines) sold by complainants or their licensees *combined with such records*, for use in carrying out the method of claim 5", to substitute a new record, purchased from another than complainants or their licensees, for the record purchased as part of the combination from complainants or their licensees, when the record purchased from complainants or their licensees has become broken, worn out by use or unsatisfactory or useless through any other cause. If the purchaser has the right, and it must be conceded that he has, *to substitute a new record for the record originally purchased* as part of the combination from complainants or their licensees, *what difference does it make whether he purchases six records or only one to make the substitution?* What principle of law can be evolved from the finding of the learned Circuit Judge that new records are bought more frequently in order to increase the repertory of tunes than as substitutes for worn out discs, other than the untenable and erroneous principle that complainants are entitled *to a monopoly of the unpatented disc sound record?*

Inasmuch as there was no evidence to show what use purchasers of defendant's records intended to make of them in complainants' machines, whether

to replace a worn out record or to increase the repertory of tunes, the question of "repair" or "reconstruction" was not presented for decision. However, the question is immaterial, as will presently be shown, since the renewal of the temporary record is neither the one nor the other.

There was *no evidence* to support the remark that new records are "bought more frequently in order to increase the repertory of tunes than as substitutes for worn out discs." But assuming such to be the fact, the result is that it is established that complainants sell the patented combination with the *intention* that the sound-record thereof shall frequently be *replaced* and that, in accordance with such intention, the purchaser acquires the *right* to replace the original record by a new record. It also appears that such substitution of records is necessary to the reasonable use and enjoyment of the purchased machine. Hence we are not concerned, in this instance, with the distinction between "repair" and "reconstruction" but with the right acquired by purchase to renew an unpatented element intended frequently to be renewed when the device is put to use, in order that the purchaser may reasonably enjoy the purchased, patented combination (see decision of this Court in the *Morgan Envelope Co.* and other cases cited *infra*, pp. 77, 83).

It is not intended at this point, to enter upon any full discussion of the law, and, as will hereinafter be shown, according to the well settled law, the rights of a purchaser of a patented combination exceed those above indicated. We are now dealing with the facts to which the principles of law must be applied, and in order that the court may be cognizant of the important facts that the sound record is merely a *temporary element* of the patented combination and that *it is intended by the*

patentee that the sound record shall frequently be replaced, while the other elements of the combination, constituting with the sound record the sound reproducing apparatus, will last indefinitely for years, the following quotations from the evidence are made.

Mr. Edwards F. Leeds, one of the foremost record makers of this country, who had been engaged in the making of sound records from the time when the North American Phonograph Company was organized in 1888 to exploit the fundamental inventions of the art of Mr. Edison and Bell & Tainter (inj. rec. p. 115, fols. 345-346) says (con. rec. pp. 37-38);—

> "I have been engaged in the manufacture of sound records of the disc and cylinder type having lateral and vertical undulations for the past fifteen years. I have, therefore, acquired a large experience and knowledge of talking machines and sound-records used therewith. The sound-record is not a part of the sound reproducing apparatus or machine which is permanent; *it is essentially a temporary part, perishable in its nature and intended frequently to be replaced.* The rest of the machine, except some forms of needles, is permanent in its nature and *will last indefinitely for years*, but the record may last for but a few minutes or a few days, depending upon the material of which it is composed and the number of times that it is used for the reproduction of sound therefrom. The needle used for contact with the sound-record in the production of sound is usually made of steel and has a sharp point. This needle fits into the record groove, and is vibrated and propelled by the record-groove. The result is that the needle wears upon the record and *it is intended and it is essential for the enjoyment and use of the machine that the record shall constantly be renewed.* Complainants sell their machine embodying the invention of

claims 5 and 35 of the patent in suit at prices ranging, according to their statement of June 1, 1906, from $17 to $100 each; while they sell their records, according to the same statement, at prices ranging from 35 cents to $5 each. If the purchaser had not the right to replace the temporary part, the record, which it is intended he shall replace, he would pay from $17 to $100 for a machine which would reproduce for him but a single record for which he may have paid only 35 cents. Therefore, as shown in the moving papers, *it has been the custom of complainants and their licensees to sell sound-records in order to* replace *the sound records sold with the machine and worn out or destroyed by use or accident. The machines are so constructed that the record can be placed upon it or removed therefrom simply by placing the record upon or taking the record off the flat disc turn-table.*

From tests which I have made and which have been made by others within my knowledge, as well as from my large experience in manufacture, I know that disc sound-records having lateral undulations such as defendant's and complainants' sound-records intended for use upon complainants' machines embodying claims 5 and 35 of the patent in suit can be used for the reproduction of sound but a very limited number of times. Unless the material of which the tablet is composed is unusually perfect the record cannot be successfully played more than twenty-five or thirty times before it has to be renewed. Often a single reproduction or two or three reproductions will destroy the record because of the quality of the material or because of the conditions under which the needle acts when following the record-groove. Frequently a record becomes useless after being played for ten or twelve times. In exceptional cases a record can be played more than thirty times and as often as fifty or sixty times. *It takes but a minute or two to play a record, and the same record can be played many times within one-half hour.*

a sufficient number of times to destroy it, wear it out and render it useless. The records, moreover, are fragile in their nature and are often broken in transportation, or by falling or other cause. Inexperienced users frequently scratch the record across the spiral lines and otherwise, through lack of proper adjustment of the needle to the record-groove, and in this manner and in other ways the records are destroyed in large quantities. Another reason why the record is intended to be but a temporary part of the machine is that after the record has been played several times it becomes tiresome.

After a single playing of the record the deterioration of the record appears. Complainants' records, after a few playings, become gray in appearance along the record-groove, showing that the friction of the needle has chipped off the edges, cut into the smooth finish of the surface, and otherwise worn out the material. The deterioration rapidly increases the oftener the record is played, until soon the record is useless. Records made by complainants' licensees, the American Graphophone Company, ordinarily cannot successfully be reproduced more than twelve or fifteen times, and the same is true of similar records made by the American Record Company. Hence, one of the problems in the record-making art is to secure a material so perfect that it will withstand the friction of the needle a greater number of times. At the present time and heretofore sound-records such as those in suit have been made by different manufacturers, including complainants and defendant, and complainants' licensees and others mentioned, of substantially the same material, all having the qualities and defects above specified by reason of which and for the other reasons stated the record is essentially a very temporary part of the machine and is intended constantly to be replaced."

The testimony of Mr. Leeds stands uncontra-

dicted. Judge Lacombe found that new records are frequently bought as "*substitutes for worn out discs*" (con. rec. p. 74). Judge Hough said "*Disc records are fragile, i. e. brittle and easily broken*" (con. rec. p. 92). Judge Wallace said of the record (con. rec. p. 95);—

> "*Any slip of the hand will destroy it. Not only is this so, but its sound producing qualities are lost by the contact of the needle which is vibrated in its grooves long before the machine proper is worn out, and generally early in its normal life*".

Berliner, in his British patent No. 15,232 of 1887, stated that the record consists of *scaling wax*, the main constituent of which is *shellac* (inj. rec. p. 523, lines 51-56). Complainants' counsel, in his brief in the Circuit Court of Appeals (pp. 40-41), stated that complainants' records consist of *shellac*, earthy material and lampblack, referring to 145 Fed. 189, C. C., where such fact was stated by the Court. *Such records have about 100 grooves to the inch and the partition walls are thin and delicate.*

It has been shown in petitioner's brief in Case No. 80 (pp. 3-7) that complainants make their records in accordance with U. S. patent No. 688,739 of Dec. 10, 1901 to Jos. W. Jones and that they were held to influence the Jones patent (151 Fed. 595). *Jones has pointed out how after several reproductions complainants' Berliner "gramophone" records are destroyed by the sound-reproducing apparatus of the patent in suit.* In U. S. patent No. 604,829, of May 31, 1898, Jones says (con. rec. p. 44, lines 35-51);—

> "In all reproducing apparatus of the above type, as far as I am aware, *a long arm has been employed to support the sound-box and stylus*, and where it has been desired to intensify the sound a horn in like manner has

thereby been supported and carried, the movement imparted to the arm, sound-box and horn being effected by the *delicate-groove of the record* working in conjunction with the stylus. It frequently happens that the sinuosities of the record leave *very delicate* partition-lines between the volutes of said record, *so that after several reproductions the grooves are caused to run together by the friction of the stylus*, thus preventing a complete and perfect reproduction of the sound-waves recorded upon the record."

Mr. Bunker, who has for several years been actively engaged in the talking machine business as a dealer and salesman, says (con. rec. p. 61);—

"The record is a *temporary part* of all sound-reproducing machines, and this is especially true of sound-reproducing machines intended for the reproduction of sound from flat disc records having lateral undulations. Such machines employ *a sharp steel needle* which fits into the record-groove and soon wears out and destroys the record. A very few reproductions of sound from a record will in many cases render the record useless. *Often from ten to fifteen reproductions will wear out and destroy the record.* Ordinarily a record can be played for about twenty-five to thirty times, and in some cases, if the material of which the record is made is of exceptional character, the record can be played a greater number of times, but the record begins to wear out with the first playing thereof; *hence such machines are so constructed that the records can constantly be replaced, and it is the practice to replace the record after one or two playings.*"

Mr. Leo Moeller, who has for the past five years been engaged in the manufacture of disc and other sound records, says (con. rec. p. 67);—

"Flat disc sound-records having lateral undulations are a *very temporary part* of a sound reproducing machine. All sound repro-

ducing machines employing such records are *designed and constructed so that the record may conveniently and frequently be removed and replaced.* A machine constructed so that the record could not conveniently be removed and replaced would be of *no value whatever*, since after the record had been played a few times it would be worn out and destroyed and the machine would then become useless. The lasting qualities of flat disc-sound-records having lateral undulations depend upon the material of which the tablet is composed and upon the perfection of manufacture of the record. All such records are made substantially to-day of the same material. The first time that the reproducing stylus passes over the record-groove, the record begins to wear out. *The stylus is a sharp steel needle, and it cuts into and wears down the edges of the surface of the record. Not infrequently a record is destroyed the first time that it is played.* Ordinarily a record may be played for about thirty times. Often from ten to fifteen reproductions will destroy a record, while sometimes, if the record is an exceptional one, it may be successfully played as often as fifty or sixty times. However, an inexperienced *user* of a machine may scratch the record even before playing and thus destroy the record, and often the records are broken and thus become useless."

The foregoing testimony of defendant's experts finds confirmation not only in the findings of the courts above referred to, but also in the affidavits of complainants' experts, who say that complainants' records are like defendant's records (con. rec. p. 21, 3rd par.; p. 23, 2nd par.).

Mr. Middleton, secretary of the Victor Talking Machine Company, says (con. rec. p. 22);—

"A large portion of the revenue of the complainant company is derived from the sale of its disc records. A purchaser of a machine or reproducing apparatus, for use in reproducing from the record, frequently expends very

much less for the machine than he does for his collection of records, as *records are being constantly purchased by the purchaser of a machine from time to time;* $25 frequently represents the purchase of a machine, while the owner of that machine, in a short space of time, will expend at least as much as $100 for records."

Mr. Haddon, treasurer of the Victor Talking Machine Company, says (con. rec. p. 24);—

> "*A large portion of the Victor Company's business has been, and is, in the manufacture and sale of disc records, for use in connection with the reproducing apparatus which it makes and sells,* and a large proportion of its profit is derived therefrom. When it sells a reproducing apparatus to a purchaser, which is part of the combination of claim 35, it is to be used in combination with the other element of the claim, sold by the complainants, the traveling tablet or record, which it also sells to the purchaser at a separate price, distinct from the price of the reproducing element."

In a further affidavit Mr. Middleton, secretary of the Victor Company, states, that for several years past he has had a great deal of experience in the testing of the disc records having a laterally undulating groove of even depth, and that he has many times made special tests to ascertain the quality and durability of the records (con. rec. p. 45, fol. 134). Mr. Middleton then says (con. rec. p. 45);—

> "I often take a record out of our stock as a sample record and spend practically a whole afternoon and evening continuously testing it on one of our reproducing machines, playing the selection over and over again to ascertain whether the material of the record disc is kept up to our standard, besides other numerous and frequent tests which I make with differ-

ent records at different times for like purposes. I have been doing this at frequent intervals for three or four years."

The court will observe that neither Mr. Middleton nor Mr. Haddon says that records are purchased to increase the repertory of tunes; nor do they deny that the records are soon worn out by use. On the contrary, they say that complainant constantly sells new records to purchasers of their machines to enable the purchasers to enjoy and continue the machines in use by replacing the records thereof.

Complainants' counsel, in his brief in the Circuit Court of Appeals (pp. 37-39), in an effort to mislead the court, referred to hard rubber, metal and other substances in which records might be made, but are not made to-day. Everybody uses shellac, including complainants and defendant and nobody uses hard rubber or metal (145 Fed. 189; 151 Fed. 601, 606). Records are multiplied in a *cheap* way by impressing a metal matrix or negative into a soft impressible material. This is a quick and cheap method of multiplying records for immediate use. When complainants' counsel argued that Berliner intended the record to be permanent (brief, C. C. A., p. 37), he misstated the fact, because on November 8, 1887, in expired English patent No. 15,232, of that date (inj. rec., p. 523, lines 51-56) Berliner pointed out the precise method used by everybody, for the quick and cheap making of duplicate copies of sound-records to-day. No other method or material, moreover, is employed to-day. Mr. Berliner said:—

> "In place of the metallic copy of the original record, I can use a copy made of *sealing wax*, which is produced by pressing a metal plate, having the record in raised lines, upon a cake or plate of sealing wax which is first softened by heat. *The metallic record may thus be preserved indefinitely without being used directly.*

for the reproduction of the recorded sounds, but, simply as a stamp for multiplying the record quickly and cheaply for immediate use."

Sealing wax is, of course, composed principally of shellac, as appears from any dictionary or encyclopedia.

Referring to the statement of defendants' expert, Mr. Moeller, "that the stylus is a sharp needle and cuts into and wears down the edges of the surface of the record," Mr. Middleton says (con. rec. p. 27);—

> "The point of a properly formed needle for this purpose, such as sold by complainants, is specially ground and shaped so as not to cut the record."

Although Mr. Middleton booms complainants' records and claims for them a durability greater than that of the records of any of the competitors of the complainant companies, it is clear that the essential proposition, namely, that the sound record is a temporary element of the combination forming the sound reproducing apparatus of claim 35, and that it is *intended* that the record shall frequently be replaced, is established. By a stretch of conscience or of imagination Mr. Middleton claims that complainants' superior records can be played two hundred fifty to three hundred times. "Infringing records", however, he says, can be played fifty or sixty times (con. rec. p. 27). The Circuit Court of Appeals has held that complainants' shellac records infringe the Jones patent of the American Graphophone Co. (151 Fed. 595 and 601). As pointed out by Mr. Leeds, the records made by complainants' licensees, the American Graphophone Company, ordinarily cannot successfully be reproduced more than twelve or fifteen times. *This Mr. Middleton does not deny.* The fact that Mr. Middleton has for several years been en-

gaged night and day in the testing of complainants' records to keep them up to the standard of durability; the fact that the points of the needles sold by complainants are specially ground and shaped so as to prevent the needle, as far as possible, from cutting the record, and the admission that complainants' records soon reach their limit of durability, even though they may be played oftener than other "infringing records" can be played, must convince the court of the truth of the self-evident fact that the disc sound record is a most delicate, temporary and perishable part of the combination of claim 35 of the patent in suit. It takes but a minute or two to play a sound-record, and, as Mr. Leeds points out, the same record can be played many times within one-half hour, a sufficient number of times to destroy it, wear it out and render it useless. Inexperienced users frequently scratch the record across the spiral lines or otherwise break or destroy the record before playing. The life of the record is therefore a matter of a few hours, as must be the case when the same record is frequently played in the penny-in-the-slot machine; or a matter of a few days or weeks or months, depending entirely upon the number of times that it is used. *If it is used, it will with certainty be worn out and destroyed within a very short period of time. The machine is, therefore, so constructed that the records can easily be placed upon it or removed from it.* The rest of the apparatus, except some forms of needles, will last indefinitely for years. Every time that the machine is put to use it is intended that the sound-record shall be replaced. It is difficult to imagine a more temporary part of a patented combination than is the sound-record of the combination of claim 35.

Complainants and their licensees sold the combination of claim 35, the sound reproducing apparatus, including the sound record thereof, to purchasers, without any restriction whatever.

The finding of the Circuit Court that defendant violated the preliminary injunction is limited, as above shown, to the sale of records by defendant to persons who had purchased "machines (other than 'mechanical feed' machines) sold by complainants or their licensees *combined with such records*, for use in carrying out the method of claim 5." The undisputed evidence is that complainants and their licensees sold the said machines, combined with such records, that is sold the sound-reproducing apparatus forming the complete combination of claim 35, to purchasers thereof, *without any restriction whatever.*

Referring to the moving affidavits, especially those of Middleton and Haddon, secretary and treasurer of the Victor Talking Machine Company, one of the complainants herein, it appears that they each make the following allegation (con. rec. pp. 21, 23);—

> "There are to-day, in use in the United States, many hundreds of thousands of reproducing apparatus of this construction, designed to be operated in this manner for reproducing sound from disc records similar to the said records manufactured by the defendant."

The reproducing apparatus referred to in the said affidavits are machines constructed according to claims 5 and 35 of the patent in suit by complainants and their licensees and sold, combined with records, to hundreds of thousands of pur-

chasers throughout the United States. Mr. Middleton in his affidavit further says (con. rec. p. 22);—

> "A large portion of the revenue of the complainant company is derived from the sale of its disc records. A purchaser of a machine or reproducing apparatus, for use in reproducing from the record, frequently expends very much less for the machine than he does for his collection of records, as *records are being constantly purchased* by the purchaser of a machine from time to time; $25 frequently represents the purchase of a machine, while the owner of that machine, in a short space of time, would expend at least as much as $100 for records."

Mr. Haddon in his affidavit also says (con. rec. p. 24);—

> "A large portion of the Victor Company's business has been, and is, in the manufacture and sale of disc records, for use in connection with the reproducing apparatus which it makes and sells, and a large portion of its profit is derived therefrom. When it sells a reproducing apparatus to a purchaser which is part of the combination of claim 35, it is to be used in combination with the other element of the claim sold by the complainants, the traveling tablet or record * * *"

There is not a word in any of complainants' affidavits to the effect that complainants or their licensees ever sold their machines and records with any restriction upon the right of the purchaser to replace the temporary part of the combination, namely, the record, when worn out, broken or otherwise rendered useless, or when a new record is for any reason desired, by records either of his own manufacture or purchased from manufacturers other than complainants or their licensees. This fact at once distinguishes the case at bar from

Heaton Peninsula Co. v. Eureka Co., 77 Fed. 288, cited by Judge Hough (con. rec. p. 91). On the other hand, it appears from defendant's affidavits that complainants and their licensees, the American Graphophone Company and the Universal Talking Machine Company, have sold within the United States, hundreds of thousands of machines and records forming the combinations of claims 5 and 35 in suit without any such restriction. It further appears from defendant's affidavits that purchasers of such machines and records from complainants or their licensees have been accustomed to replace the records sold by complainants by records sold by one of their licensees; and that purchasers of such machines and records from one of the licensees have been accustomed to replace the records by complainants' records; and that *all purchasers have been accustomed to replace said records purchased with said machines by records not made or sold by complainants or their licensees*, and have at all times, from the beginning down to the present day, understood that such was their right, and *no intimation of any restriction to the contrary has ever been given by complainants or their licensees* (con. rec., affs., E. F. Leeds, pp. 36-37; L. H. Bunker, p. 61; L. Moeller, p. 67).

Defendant Company's Disc Sound Records are Unpatented Articles of Commerce of the Prior Art.

Complainants attempt by these proceedings for contempt to secure a monopoly of the *unpatented sound-record of the prior art*, which is nowhere claimed in the patent in suit, except as a temporary part of the combination of claim 35. This combination, the sound reproducing apparatus of claim 35, illustrated in Fig. 3 of the patent in suit (inj. rec. p. 454), complainants and their

licensees have sold to the public without restriction (con. rec. p. 36; p. 61; p. 67), thereby releasing the *combination* from the monopoly of the patent.

Judge Hough said the "record is an unpatented article" (con. rec. p. 91). So did Judge Wallace (con. rec. p. 94).

Defendant's sound records, here in question, were disc sound records of lateral undulations and even depth. Such sound records belong to the prior art and were described and patented by Berliner, the patentee of the patent in suit, in the United States and foreign countries, before the issue of the patent in suit, by numerous patents which have all *expired*. This appears from U. S. patents No. 372,786, of Nov. 8, 1887, applied for May 4, 1887 (inj. rec. p. 416) and No. 382,790, of May 15, 1888 (inj. rec. p. 434); English patents No. 15232 of Nov. 8, 1887 (inj. rec. p. 516, Figs. 1 and 8 and claim 15, p. 525) and No. 7204 of May 15, 1888 (inj. rec. p. 528); German patents No. 45048, of Nov. 8, 1887 (inj. rec. p. 132, claims 1-5, pp. 142-145) and No. 47,099 of May 16, 1888 (inj. rec. p. 145); and from various other patents.

Berliner, moreover, described and illustrated such disc sound records and the use thereof upon "mechanical feed" machines of the prior art, not only in the patents above mentioned but also in the Electrical World for Nov. 12, 1887 (inj. rec. p. 243).

Edison, in English patent No. 1644 of 1878, disclosed, at the time of invention of *all* sound recording and reproducing machines, disc sound records of the zigzag type, that is with lateral undulations of even depth (inj. rec. p. 473, lines 53-57), and the use thereof upon sound-reproducing machines, which as shown in Figs. 1 and 2 (inj. rec. p. 484) might be feed-device machines or as shown in Figs. 34 and 37 (inj. rec. p. 486) might be ma-

chines in which the feed-device was dispensed with and the stylus propelled across the record by the groove of the record (inj. rec. p. 479, lines 48-53; p. 480, lines 11-14; claim 1, p. 482; Point Three, p. 65, of petitioner's brief in Case No. 80).

Bell & Tainter, in U. S. patent No. 341,214 of May 4, 1886, at the time of the invention of the graphophone, disclosed, before Berliner had applied for any of his talking machine patents, disc sound records and the use thereof upon sound-reproducing machines (inj. rec. p. 387) wherein the reproducing stylus was mounted on a universal joint so that it was free to be "guided by the record" and "free to follow the sound record" (inj. rec. p. 391, lines 84-104; claims 19-23, p. 397; Point Four, p. 80, of petitioner's brief in Case No. 80). As pointed out in Tainter's U. S. patent No. 385,886, of July 10, 1888, the disc graphophone was adapted to operate with a record of lateral, as well as with a record of vertical, undulations (inj. rec. p. 443, lines 7-15). Berliner and Edison, by the patents above mentioned of the *prior art*, had pointed out the same thing.

Judge Hazel, in construing claims 5 and 35 of the patent in suit, held that the *kind* of record employed was no part of the invention. The invention, he held, as above pointed out at pp. , consisted in propelling the stylus "over the surface of the record, without mechanical assistance, and through the means of the groove alone" (140 Fed. 863). Judge Hazel said (140 Fed. 864);—

> "The broad claims in suit in my judgment cannot be restricted to a record of even depth, such as described in the specification."

But whether the claims in suit are limited by a record of even depth as an element of the combination thereof, or are not so limited, *it is a proposition, which admits of no dispute, that the sound-record is an unpatented article of the prior*

art, nowhere claimed in the patent in suit. The essence of the alleged invention of the claims in suit resided therefore, not in the sound-record, but in the mounting of a stylus, by means of a universal joint or swinging arm, in such manner that it was free to be propelled by the groove of the disc sound-record of the prior art, which record was used for the reproduction of sound in the prior art in precisely the same manner.

The Mechanical Feed-Device Machines of the Prior Art and the Present Day.

It will be seen that in the decree for contempt (con. rec. p. 75), *Judge Lacombe expressly excepted "mechanical feed" machines from the finding of contempt.* It is the sale of records by defendant with the intent that said records shall be used in combination with the other elements of claim 35 in machines (other than "mechanical feed" machines) sold by complainants or their licensees combined with such records, for use in carrying out the method of claim 5, which Judge Lacombe has held is a violation of the injunction herein. The sale for such records for use on mechanical feed machines is concededly not a violation thereof.

This finding of Judge Lacombe with reference to mechanical feed machines was based upon the following facts proved by the evidence. As shown by the evidence (aff. Hicks, con. rec. p. 69);—

> "Upon the argument of the motion for preliminary injunction in this suit before Judge Townsend, complainants' counsel refused to contend that the mechanical feed-device Talk-o-phone was an infringement of claim 5 or claim 35 of the patent in suit. Upon this point complainants' counsel said in his brief:
>
> 'As these so-called 'mechanical feed' ma-

chines have not been offered in this case as alleged infringing machines, it is not an issue now in these suits.'

"Complainants' counsel, therefore, refused to discuss the question of the mechanical feed-device Talk-o-phones and stated that he presumed

'that the Court does not desire, without the benefit of a full discussion, to say, upon these motions, whether these so-called 'mechanical feed' machines are, or are not, mere attempted evasions of claims 5 and 35 of the patent in suit.'

"In view of the prior art and of Judge Hazel's finding, which also was the finding of the Circuit Court of Appeals in the prior suit, that the propelling of the stylus over the surface of the record without mechanical assistance and through the means of the groove alone was the primary object of the inventor, Berliner, the reason underlying the refusal of complainants' counsel to contend that mechanical feed-device machines were an infringement appears."

Judge Hough said that the feed-device machine is not an infringement and that petitioner's records are equally suitable for the feed-device machine and for that of complainants (con. rec. p. 91).

Referring to mechanical feed machines, Mr. Leeds, in his affidavit, says (con. rec. p. 31);—

"On Monday, October 15, 1906, defendant began to use and sell its sound records in connection with said feed-device machines exclusively, and on October 13, 1906, defendant ordered and purchased from the Talk-O-Phone Company one hundred such feed-device machines for use and sale in connection with its sound-records, receiving the first consignment thereof early Monday morning, October 15, 1906. As fully shown in the annexed affidavit of defendants' coun-

sel, complainants on the motion for preliminary injunction refused to contend that such feed-device machines were an infringement of any of the claims of the patent in suit, alleging that such mechanical feed-device machines were not in issue in this suit, and complainants' counsel requested the Court not to pass upon such mechanical feed-device machines, stating that the Court presumably would not desire to do so without a full discussion, which complainants' counsel refused to make. The Leeds & Catlin Company have been advised by counsel for defendant that such mechanical feed-device machines are not an infringement of the patent in suit, have not been held by the courts to be an infringement of the patent in suit, are not included in the terms of the preliminary injunction issued in this suit, and that complainant's counsel has refused to contend in this suit that such mechanical feed-device machines are an infringement of the patent in suit."

There is *no evidence* in the record to support the contention of complainants' counsel made in the Circuit Court of Appeals (brief, p. 20) that the feed-device machine is not and never has been on the market. *Judge Lacombe made no such finding* (con. rec. p. 75) and there is *no warrant in the evidence* for the remarks of Judge Hough (con. rec. p. 92). The state of the art disclosed in petitioner's brief in case No. 80, upon the record here before the court in No. 81, shows how erroneous is Judge Hough's remark that the record is useful only in respect of complainants' machine (con. rec. p. 93). Defendant had and has such a machine on the market and complainants have brought suits against certain other makers of feed-device machines alleging that they are not true feed machines. Two such suits are pending undetermined, in which injunctions have been refused,

one in Michigan against the *Duplex Co.* and one in Pennsylvania against *Hawthorne & Sheble,* both unreported.

The material question, however, is whether the feed-device machine *can* be made and used without infringing the Berliner patent. Concededly it can, and the courts cannot, therefore, prevent the making and use of such machines by enjoining the selling of the unpatented record. Manufacturers have a right to develope, change or continue a lawful business. The feed-device Talk-o-phone is illustrated and described in the injunction record (p. 291); and described in the contempt record (p. 56). For defendant's feed-device machine see contempt record (pp. 55, 58).

Upon the appeal from the order for preliminary injunction herein, complainants' counsel, referring to defendant's exhibit of defendant's mechanical feed-device Talk-o-phone, again refused to contend that feed-device machines used with disc sound records of lateral undulations and uniform depth were an infringement of claims 5 and 35 of the patent in suit, but as stated in his brief on said appeal (p. 197) said;—

> "The court below very properly refused to consider the exhibit, as it was *not* one of defendant's machines purchased by the complainants *or charged with infringement in this case.*"

In view of the position take by complainants' counsel with reference to mechanical feed machines, defendant's counsel, under Point Fifteen (p. 195) of defendant's brief in the Circuit Court of Appeals, on said appeal, dealing with the point that mechanical feed-device machines do not infringe claims 5 and 35 of the patent in suit, said;—

> "As complainants, in the Circuit Court, refused to contend that the Talk-o-phones,

> operating by mechanical feed-devices, are an infringement of claims 5 and 35, this point is of importance only in so far as it bears upon the prior art."

Under Point Twelve (p. 187) of defendant's said brief in the Circuit Court of Appeals, defendant's counsel stated the sole question of infringement charged by complainants; and referring, not to the mechanical feed-device Talk-o-phones, but to Talk-o-phones without mechanical feed-devices, said;—

> "Complainants allege and show by a moving affidavit, however, that the Leeds & Catlin Company sold one of these Talk-o-phones. This raises the question of infringement with reference to the machines as to both defendants, although obviously the question is of small importance as far as the Leeds & Catlin Company is concerned, but of great importance as far as the Talk-O-Phone Company is concerned."

The briefs of both parties in the Circuit Court of Appeals upon the injunction and contempt branches of this suit are annexed to the moving and opposing papers on the petitions for the two granted writs of *certiorari*.

It has already been shown in considering above the vital element of claims 5 and 35 in suit, that mechanical feed-device machines were employed in the prior art for the reproduction of sound from disc and cylindrical records of all kinds, especially from disc sound records of lateral undulations and uniform depth. When considering the disc record of lateral undulations and uniform depth as an article of manufacture existing before the date of the invention of the patent in suit, it was shown (*supra*, pp. 16-20, 44) that mechanical feed machines, adapted for the reproduction of sound from *disc* sound records, lie at the very basis of the art of recording and reproducing sound,

and have been in existence ever since Mr. Edison first invented the *disc* and cylindrical phonograph in 1877 (see English patent No. 1644 of 1878, inj. rec. p. 472), and Bell & Tainter first invented the *disc* and cylindrical graphophone (see U. S. Patent No. 341,214 of May 4, 1886 inj. rec. p. 387), and Berliner first devised his gramophone of the prior art for the reproduction of sound from disc and cylindrical sound records of lateral undulations and uniform depth, copied in solid resisting material, according to the various processes for which he secured letters-patent (see English patent No. 15,232 of Nov. 8, 1887, inj. rec. p. 516, Figs 1 and 8; U. S. Patent No. 372,786, of Nov. 8, 1887, Fig. 1, inj. rec. p. 416; U. S. Patent No. 382,790 of May 15, 1888, inj. rec. p. 434; Electrical World for Nov. 12, 1887; inj. rec. p. 243, Figs. 1 and 2).

The evidence shows that such mechanical feed device machines are practical and commercial and have been manufactured and sold by the millions, from the time of Edison's invention of the phonograph in 1877 down to the present day, for the reproduction of sound from disc and cylindrical sound records of lateral and vertical undulations, and that the unsupported allegations of complainants' affiants that disc records of lateral undulations can be used only on the machines of claim 35 of the patent in suit are false. Of course this fact and the falsity of the allegations of complainants' affiants are conclusively established by the many patents of the prior art found in the injunction record and above referred to; the affidavits of defendant's experts, moreover, establish the same (affs., con. rec. E. F. Leeds, p. 31, pp. 55-56; L. H. Bunker, pp. 60-61; L. L. Leeds, pp. 63-64; L. Moeller, pp. 65-66).

On the motion for injunction, complainants' expert, Mr. Kennedy said (inj. rec. p. 58, fol. 172);—

> "the *main distinction* of the invention of the patent in suit over the *prior art* is in the manner of the propelling of the stylus across the record, which is not accomplished by an auxiliary feed screw, but is due to the operating engagement of the stylus point with the record groove itself, independently of other means."

In support of this statement, Mr. Kennedy, in his affidavit, quoted from Judge Hazel's opinion in the prior suit, shown to have been erroneous under Point Four, p. 88, of petitioner's brief in Case No. 80, to the effect that the principle of operation in the Berliner machine of the patent in suit differed from the Bell & Tainter feed-device machine of the prior art, in that in the Bell & Tainter machine a feed screw was necessary to effect the passage of the record over the point of the stylus..

Mr. Kennedy further said (inj. rec., p. 61, fol. 183), that the principle of Berliner's alleged invention consisted in

> "vibrating the diaphragm and propelling the stylus and the sound reproducer by and in accordance with the groove of the sound-record *across the surface of the record, and without a feed screw or other mechanism.*"

The court will observe that complainants were unable to differentiate the alleged invention of the patent in suit from the sound reproducing machines of the prior art except *by reading into claims 5 and 35* the limitation that the vibrating and propelling of the stylus along the record-groove, by and in accordance with the record-groove, shall be across the surface of the record and without a feed screw or other mechanism. *The claims contain no such limitation and are, therefore, void, in view of the prior art*, as shown at pages 90-96 of petitioner's brief on the injunction branch of this suit, No. 80.

Berliner, moreover, neither made nor intended to make any such limitation in claims 5 and 35, as fully shown at pages 172-178 of petitioner's brief in case No. 80.

In *McCarty* v. *Railroad Co.*, 160 U. S., 110, 116 and in *F. B. Stearns Co.* v. *Russell*, 85 Fed. 218, 224 (C. C. A.) it was held that,

> *"To imply as elements of a claim parts not named therein for the purpose of limiting its scope, so that it may be accorded novelty, is contrary to a well-settled rule of the patent law."*

The following propositions are clearly correct; first, that claims 5 and 35 are void in view of the prior art, for the reasons stated; second, that, conceding their validity, they do not cover the feed-device machine of the prior art.

The disc, sound record of lateral undulations and uniform depth is an article of the prior art and is concededly adapted for use upon the feed-device machines of the prior art and of the present day. Everybody *should be* at liberty to make, use and sell such sound records and such feed-device machines. Nevertheless, the courts below, by holding defendant in contempt in the case at bar, have enjoined the making, selling and using of an unpatented article, namely, the sound record, adapted for use upon sound reproducing machines of the prior art which concededly are not covered by the claims of the patent in suit. Furthermore, since defendant company is not permitted to make and sell upon the open market the unpatented sound record, the effect of the decisions of the courts below is to enjoin or prevent the making, selling, buying and using of the sound reproducing machines of the prior art, for such machines cannot be used without the sound record and such machines cannot be sold upon the market unless purchasers

thereof can also find sound records upon the open market.

Every individual is prevented, under the decisions of the courts below, from *making* and using a sound reproducing machine of the prior art, since, under the decisions of the courts below, he cannot obtain in the open market a sound record for use thereon made by defendant or manufacturers other than complainants.

Thus under a patent for an alleged *improvement only* upon the sound reproducing machines of the prior art, complainants have secured a practical monopoly of the unpatented sound record and sound reproducing machines of the prior art, since, under the decisions of the courts below, any person making and selling the sound record, on the open market, does so *at his peril.* Neither public policy nor the patent law permits such an invasion of the rights of the public. As Judge Wallace says, the majority opinion in the Circuit Court of Appeals "*extends the monopoly of the patent owner to an unprecedented extent.*"

Defendant's disc sound records are articles of commerce sold for export, and exported, to foreign countries in large quantities.

The evidence on this point is uncontradicted and is set forth in defendant's affidavits (con. rec. E. F. Leeds, p. 35, p. 57; L. L. Leeds, p. 64; L. Moeller, p. 67).

Assignment of Errors.

The following is the assignment of errors (con. rec. p. 82);—

The Circuit Court erred in the following particulars;—

1. In holding that defendant violated the order

and writ of injunction herein, in that defendant after said order and writ of injunction sold the *records* of claim 35 of the patent in suit, No. 534,543, of February 19, 1895, to Berliner, with the *intent* that said records should be used in combination with the other elements of that claim in *machines* (other than "mechanical feed" machines) *sold by complainants or their licensees combined with such records* for use in carrying out the method of claim 5 of said patent.

2. In holding that the order and writ of injunction herein enjoined and restrained defendant *in any way* from selling the *record* forming an element of the combination of claim 35 of the patent in suit.

3. In not holding that defendant, notwithstanding the order and writ of injunction herein, was at liberty to sell the *record* of claim 35 of the patent in suit for use in combination with the other elements of that claim in *machines, embodying the invention* of claims 5 and 35 of the patent in suit, *sold by complainants or their licensees.*

4. In holding that the *intent* with which defendant sold records was a violation of the order and writ of injunction herein *without proof* that any record sold by defendant was *used* by the purchaser *in infringement* of claim 35 of the patent in suit.

5. In holding that the *intent* with which defendant sold records was a violation of the order and writ of injunction herein *without proof* that any record sold by defendant was *used* by the purchaser *in infringement* of claim 5 of the patent in suit.

6. In holding that the *intent* with which defendant sold records was a violation of the order

and writ of injunction herein *without proof* that defendant *knew or was informed* that the *purchaser intended* to use a record purchased, *in infringement* of claim 5 or claim 35 of the patent in suit.

7. In holding that the selling of records by defendant to be used by the purchaser to *replace* a record purchased by him, from complainants or their licensees, together with a machine, embodying in combination the invention of claims 5 and 35 of the patent in suit, was a violation of the order and writ of injunction herein.

8. In not holding that, under the order and writ of injunction herein, defendant was at liberty to sell records to purchasers, from complainants or their licensees, of machines and records, embodying in combination the invention of claims 5 and 35 of the patent in suit, to enable such purchaser *to repair* the combination of such machine and record when the record should be *worn by use or broken.*

9. In holding that the question of defendant's right to sell records for use on machines embodying the invention of claims 5 and 35 of the patent in suit, sold by complainants or their licensees, had been *adjudicated* by the Court against defendant on the motion for or by the order and writ of injunction herein.

10. In not holding that the question of defendant's right to sell records for use on machines embodying the invention of claims 5 and 35 of the patent in suit, sold by complainants or their licensees, was *a new and doubtful question which was raised for the first time* upon the motion to punish defendant for contempt and which should not be passed upon in any such proceeding as a proceeding to punish for contempt.

11. In not holding that the records sold by defendant were adapted for *a useful purpose* other than for use upon machines embodying the invention of claims 5 and 35 of the patent in suit, and that defendant was, therefore, at liberty to sell such records on the *open market*.

12. In holding that defendant sold records with the *intent* that the same should be used in combination with the other elements of claim 35 of the patent in suit on machines sold by complainants or their licensees.

13. In not holding that the purchaser, from complainants or their licensees, of a machine and record embodying in combination the invention of claims 5 and 35 of the patent in suit, had *a legal right to improve upon* the said combination as he saw fit, and that defendant had a right to sell records to such purchaser to enable him to accomplish such purpose.

14. In holding that defendant by the sale of records *contributed to infringement* of claims 5 and 35 of the patent in suit, and thereby violated the order and writ of injunction.

15. In not holding that the record is *a perishable, temporary element* of the combination forming the machine embodying the invention of claims 5 and 35 of the patent in suit, *which must be, and is intended to be, frequently replaced*, and that defendant had the right to sell such records to the purchasers of such combination from complainants or their licensees to enable them *frequently to replace* such perishable, temporary records or parts of the combination.

16. In not holding that complainants and their licensees sold the combination embodying the invention of claims 5 and 35 of the patent in suit to

purchasers *without restriction* as to the records to be used to replace those purchased, and that defendant, by reason thereof, had the right to sell records to such purchasers for use in replacing records so purchased with machines from complainants and their licensees.

17. In not holding that defendant's records were *articles of commerce* which defendant could legally sell for *export* to foreign countries, for use in the United States on *mechanical feed-device machines* and for other lawful purposes, and that the sale of records by defendant on the *open market* was, therefore, a lawful act and not a violation of the order or writ of injunction herein.

18. In holding that the question of *contributory infringement* was involved in the sale by defendant of its records, the court *not* finding that defendant sold a record to any person who *constructed the other elements* of claim 35 of the patent in suit for use with such record or to any person who *used such other elements*, except persons who had purchased the same, together with records, from complainants or their licensees.

19. In holding that defendant sold records with an *intent to contribute to the infringing act* of another and in violation of the order and writ of injunction herein.

20. In construing claims 5 and 35 of the patent in suit and the order and writ of injunction herein so as to give to complainants *a monopoly of the unpatented record* forming part of the combination of claim 35.

21. In not holding that when complainants or their licensees sold the combination of claim 35 of the patent in suit, said *combination passed out of the monopoly of the patent* and the purchaser

thereof had the *right to repair, improve upon and use the same as if dealing with property of any other kind*, and, therefore, the right to purchase from defendant records *to replace* the records of the purchased combination.

22. In not holding that complainants and their licensees, by the selling of *the elements, other than the record*, of claim 35 of the patent in suit, *impliedly licensed* the purchaser thereof to combine a suitable record with such purchased elements, and for that purpose to purchase such a record from persons other than complainants or their licensees.

23. In holding that the *substitution* of a new record for a record of the combination of claim 35 of the patent in suit is *not a repair* of the combination.

24. In holding that the *substitution* of a new record for a record of the combination of claim 35 of the patent in suit is *not an improvement* of the combination.

25. In holding that a purchaser, from complainants or their licensees, of the combination of claim 35 of the patent in suit, had not the right to purchase, from another than complainants or their licensees, a new record and *to substitute* in the said combination the new record for the old record thereof *in order to increase his repertory of tunes*, and that defendant had not the right to sell a record to such purchaser for such purpose.

26. In holding that because a purchaser, from complainants or their licensees, of the combination of claim 35 of the patent in suit, may frequently purchase a new record to increase his repertory of tunes, he has not the right to purchase, from another than complainants or their licensees, a new

record in order *to repair or improve* the said combination.

27. In adjudging defendant in contempt of the order and writ of injunction herein.

28. In adjudging that defendant had disobeyed the order and writ of injunction herein.

29. In adjudging that defendant be fined in any sum.

POINT ONE.

The sound record is a temporary element of the combination forming the machine of the patent in suit and it is intended that the sound record shall frequently be replaced. The machine has no other use. It is well settled law that purchasers of such combinations from the patentee or his licensees have the right to replace such temporary parts, and that any manufacturer has the right to sell such parts to such purchasers for such purpose. The Courts below, therefore, erred in holding that defendant violated the injunction by selling records with the intent that the same should be used in combination with the other elements of claim 35, in machines sold by complainants or their licensees combined with such records.

(See assignment of errors, Nos. 1, 3, 7, 8, 13, 15, 20, 21, 22, 23, 24, 25, 26, *supra*, p. 54).

There is no distinction whatever between the question here involved and the question involved in *Morgan Envelope Co.* v. *Albany Paper Co.*, decided by Judge Wallace (40 Fed. 577) and this Court (152 U. S. 425). The principle of law applicable to this case, was so clearly stated by Judge Wallace and by this Court in the *Morgan Envelope Company* case that the attempted distinction, in the Courts below, between the facts of this case and the facts of the *Morgan Envelope Company* case must be understood as a rejection of the principle of law settled and decided by this Court in the *Morgan Envelope Company* case. As above pointed out at page 28 of this brief, the evidence conclusively establishes that the sound record is a *temporary* element of the combination forming the sound reproducing apparatus of the patent in suit, and that it is intended that the sound record shall frequently be replaced. *The fact that the sound record is a temporary element of the combination is of controlling importance.* The elements of the apparatus, other than the sound record, will last indefinitely for years. Complainants, in making and selling the patented sound-reproducing apparatus, *intend* that the sound record shall "be only temporary in the use of the whole" apparatus, and that the single apparatus shall, until it wears out, be used by the purchaser, for the reproduction of sound from hundreds of different sound records. The sale of the apparatus conveys the right so to use it. If the use of the apparatus were to be restricted to reproduction of sound from a single record sold as part thereof, complainants would find no purchasers since the apparatus would be of no value to a purchaser. By purchase of the combination, the purchaser acquires the right to replace the record thereof for any reason sufficient to the purchaser, whether it is because the purchaser desires to

hear a new selection or because the original record has been broken, worn out or otherwise destroyed.

In *Wilson v. Simpson*, 9 How. 109, 125, this Court stated the controlling principle, as follows;

> "The right of the assignee to replace the cutter-knives is *not* because they are of *perishable* materials, but *because the inventor of the machine has so arranged them as a part of the combination, that the machine could not be continued in use without a succession of knives at short intervals.* Unless they were replaced the invention would have been of little use to the inventor or to others."

The sound record, because of the marvelous delicacy of the undulations of the record-groove, and because of the fragility of the material in which it is formed, and because of the constant wear of the reproducting stylus upon the delicate undulations constituting the record-groove, may be worn out or broken or otherwise rendered unsatisfactory or useless within even the short space of an hour or a day The record cannot be used in the sound reproducing apparatus for the reproduction of sound therefrom for any considerable number of times without the certain destruction of the record. Even before the record is destroyed it will become useless, because, for a time at least, no one will desire to hear it repeated. *Unless the sound record be replaced at short intervals, the sound reproducing apparatus, of which the record is an element, would be of little use to the inventor or to others.*

It will be seen, from the quotation above made (p. 32) from the affidavit of Mr. Leeds, that

> "If the purchaser had not the right to replace the temporary part, the record, which it is intended he shall replace, he would pay from $17 to $100 for a machine which would reproduce for him but a single record for which he may have paid only 35 cents."

This being so, the inventor, Berliner, so devised and constructed the sound reproducing apparatus of the patent in suit that the temporary element, namely, the record, could be easily placed upon and taken off from the disc turn-table which holds it during the operation of the apparatus while sound is reproduced therefrom. The other elements of the combination, constituting the sound reproducing apparatus, were devised and constructed to last and to be used for years.

The testimony on behalf of complainants is that they sell the sound reproducing apparatus, including the record, forming the combination of claim 35 of the patent in suit, and that purchasers of the apparatus from complainants and their licensees constantly purchase new records, with the result that as time goes on the purchaser is obliged to expend far more for records than he originally expended for the machine combined with a record. The record is an unpatented article of commerce, which was known and used in the prior art. *Complainants seek a monopoly of the unpatented sound record because, forsooth, it is adapted for use as a temporary element of the patented combination, as well as for use as a temporary element upon the mechanical feed machines of the prior art.*

When the learned Circuit Judge stated that the disc sound-record is wholly unlike the toilet paper of the *Morgan Envelope Company* case, giving as the reason that the toilet paper was destroyed by a single use, he clearly erred. The learned Judge conceded, as he was bound to concede, that the disc sound-records wear out and that purchasers frequently bought new records "as substitutes for worn out discs." Obviously, it is not true that the toilet paper is destroyed by a single use. The roll of toilet paper, forming a temporary element of the patented combination of the *Morgan Envelope*

Company case, will serve not for a single use, but for many uses and until the last sheet of the many sheets of the roll has been used. In like manner, the disc sound record is used to reproduce sound therefrom several times until at last, after a number of uses, no one desires to hear it repeated or the sound record is worn out, broken or otherwise destroyed. The sound-record, like the toilet paper, is destroyed in the use thereof. In the use of the reproducing apparatus, the sound is delivered from the record and the record is destroyed, or rendered useless through repetition, just as in the use of the fixtures, forming with the paper rolls the patented combination of the *Morgan Envelope Company* case, the paper is delivered and destroyed. When the learned Circuit Judge endeavored to distinguish the sound-record from the toilet paper, upon the ground that the toilet paper was destroyed by a single use, he had in mind, no doubt, the cotton-tie case hereafter referred to, where the cotton-tie was entirely destroyed by a single use, just as a torpedo is destroyed by a single explosion There is, however, no analogy whatever between the case of the toilet paper and the case of the cotton-tie, as pointed out by this Court in the *Morgan Envelope Company* case. *The cotton-tie was sold subject to a license for a single use only, and the tie was, in fact, destroyed by the single use.* Such was not, however, the case with the combination of which the toilet paper was a temporary element. The *fixture* was not destroyed by the use and destruction of the paper, as this Court pointed out, nor is the *sound reproducing apparatus* destroyed when the sound-record forming an element or part thereof becomes useless through repetition or is broken, worn out or otherwise destroyed. To restore the combination of which the toilet paper forms a part, it is necessary merely to replace the toilet paper; and, in like man-

ner, to restore the combination of which the record forms a part, it is necessary merely to replace the record. *In neither case is there a reconstruction of the patented combination, but in each case there is merely the intended replacement of a temporary part. Hence, the distinction between "repair" and "reconstruction" is not involved in the case at bar. The fundamental error of the Courts below* (discussed *supra*, p. 6), *clearly arose from their failure to apply the ruling of this Court in the Morgan Envelope Company case, that the "renewal" of a temporary part of a patented combination is neither repair nor reconstruction. It is a right acquired by the sale and purchase of a patented combination involving a temporary element.*

The sound-record becomes useless or wears out just as the cutter-knives, forming part of the patented combination of the planing machine in *Wilson* v. *Simpson*, *infra*, where it was held that the purchaser had the right to replace the cutter-knives at short intervals. In the *Morgan Envelope Company* case, this Court stated that the replacement of the toilet paper was *nearly* analogous to the replacement of the cutter-knives. Clearly the replacement of the sound record is *exactly* the same in principle as the replacement of the cutter-knives. In the construction of the planing machine, it was *intended* that the cutter knives should be replaced at short intervals, because the machine could not be continued in use without a succession of knives at short intervals. So, in the construction of the sound reproducing apparatus, it is *intended* that the sound record shall be replaced at short intervals, and as already shown, the apparatus cannot be continued in use without a succession of records at short intervals. It was not intended that there should be a complete destruction of the planing machine when the cutter-knife was worn out or was

unsuited for a particular use, nor is it intended that there shall be a complete destruction of the sound reproducing apparatus when the record becomes useless through repetition or is broken, worn out or otherwise destroyed. On the contrary, complainants constantly sell to a purchaser of a single machine, new sound records to be *substituted* for the sound record or records originally purchased with the machine. *In the cotton-tie case, it was intended that there should be, and there was, in fact, a complete destruction of the tie as a result of the single use thereof.*

The learned Circuit Judge in his opinion also referred to the carbon-filament case (*Davis Elec. Works* vs. *Edison El. Light Co.* 60 Fed. 276). In the carbon filament case there was, however, by the use of the patented combination of which the carbon-filament was an element, such a complete destruction of the combination that *a reconstruction of the combination was necessary in order to replace the carbon filament.* The carbon-filament case is exactly like the cotton-tie case, and rests upon the same principle and has no analogy whatever to this case or to the case of the cutter-knives, or to the case of the toilet paper.

The clear distinction between the carbon filament case and the case at bar appears from the following quotation from the opinion of the Circuit Court of Appeals in that case (60 Fed. 276, 281;—

> "The appellants do not bring themselves within the expression in Wilson v. Simpson, 9 How. 125, renewed in substance in Cotton Tie Co. v. Simmons, 106 U. S. 94, to the effect that *temporary parts may be replaced 'in accordance with the intention of the vendor.'* While the supreme court has not expressly given this as a limitation, it may be made effectual as a permit where the facts authorize it. In this case *the plan of construction,*

which permits no severance of the parts by any ordinary method of detachment, the sale price of the entire device, about 30 cents, the comparatively large cost of the so-called reparation, the special skill required to make it, the fact proven that the device is made so cheaply that it can be thrown away without substantial loss when the filament is worn out, and the experience that, though the patent had run about 13 years, and some 13,000,000 lamps had been made before respondents below commenced the so-called reparations, destruction of the lamp after the filament was worn out had been the rule, distinguish this device in this respect from those which preceded it, *exclude the suggestion of either express or implied assent by the patentees to a renewal of the filament*, and compel the appellants to meet directly *the issue of reparation as against reconstruction.*"

In the case at bar the temporary sound record is frequently replaced "in accordance with the intention of the vendor." *Complainants constantly supply purchasers of their machines combined with records, with new records to replace the old records.* The facts of the case at bar, therefore, authorize the purchaser constantly to replace the temporary record. The plan of construction of the sound reproducing apparatus permits the severance of the record by the simplest and most ordinary method of detachment and the price of the record, from 35 cents to $5, is exceedingly small when compared with the price of the machine, which varies from $17 to $100.

There never was a sound reproducing apparatus sold, combined with a record, to a purchaser who did not frequently replace the record. The distinction between the principle and the facts of the carbon-filament case and the principle and the facts of a case such as the case at bar, is so clear and has been so often pointed out in the opinions

of the courts, that it requires no further argument to show that the learned Circuit Judge erred when he held that the substitution of a new record for an old record in the combination of claim 35 of the patent in suit was not, in any legitimate sense, "repairs," or within the rights of the purchaser, and cited, in support thereof, the carbon filament case.

The Circuit Court of Appeals for the First Circuit, which decided the carbon-filament case, distinguished the cotton tie case and the carbon-filament case from the cutter-knives case, according to the principles above stated, in *Goodyear Co.* v. *Jackson* (112 Fed. 146, 150), where the Court said:

> "When the patent is for *a single thing*, like a knitting needle, for example, and not for a device or machine composed of several things or elements combined, it is obvious that the replacement of an old needle by a new one in a knitting machine is not repair, but *a reproduction of the patented thing*. *Aiken v. Manchester Print Works*, 2 Cliff., 435; *Morgan Envelope Co. v. Albany Paper Co.*, 152 U. S. 425, 435; *Wilson v. Simpson*, 9 How. 109, 124.
>
> When the patent is for a device embracing the combination of several elements, a purchaser will infringe by reconstructing the device after it has fulfilled its purpose and is substantially destroyed. Where, for instance, the patent was for a cotton-bale tie, consisting of a band and buckle, and *'licensed to use once only,'* it is manifest that the severance of the band at the cotton mill was intended to operate as *a destruction of the tie*, and that *to roll and straighten the pieces of the band and rivet the ends together, at the same time using the old buckle, was a reconstruction of the tie, and not repair. Cotton-Tie Co. v. Simmons*, 106 U. S. 89.
>
> Again, where the subject of the patent was an electric lamp, and the invention resided in

the discovery that an attenuated carbon filament, if operated in a high vacuum would withstand disintegration and the claim was for the combination of carbon filaments with a receiver made entirely of glass, and conductors passing through the glass, from which receiver the air is exhausted, it is plain that, *when the filament is destroyed, and the vacuum is destroyed by making a hole in the receiver, and nothing remains but a perforated glass bulb and the conductors, the lamp is practically destroyed*, and that to replace the old filament with a new one, and again exhaust the air in the receiver and again seal it, is substantially the making of a new lamp. *Davis Electrical Works v. Edison Electric Light Co.*, 60 Fed. 276.

Where the patent is for a machine, which commonly embraces the combination of many constituent elements, the question of infringement by the purchaser will turn upon whether the machine is only partially worn out or partially destroyed, or is entirely worn out, and so beyond repair in a practical sense. In the case of a patent for a planing machine composed of many parts it was held that the replacement of the rotary knives, *'the effective ultimate tool' of the machine*, was repair, and not reconstruction. *Wilson v. Simpson*, 9 How. 109. In that case the Supreme Court rested its decision on two grounds: (1) *The right of the owner to replace a material part of the patented combination;* and (2) *the right to replace a part of the machine which it was known would quickly wear out, such replacement being necessary to a continued use of the machine, and therefore contemplated by the patentee when the machine was sold.* The decision in that case contains a careful discussion of the rights of a purchaser of a patented machine, and of the fundamental grounds on which those rights are based, and of the difference between repair and reconstruction."

The Morgan Envelope Company Case in the Circuit Court and Judge Wallace's Opinion Therein (40 Fed. 577).

After stating that three patents were involved in the suit, Judge Wallace held that the first patent for a package of toilet paper was "invalid for want of novelty" (p. 578). The learned judge then held that the other two patents for the combination of the package of toilet paper and mechanism to be used therewith disclosed and claimed "an ingenious and meritorious invention" (p. 579). The package of toilet paper stood, therefore, as an unpatented article, forming, however, an element of a combination based upon "an ingenious and meritorious invention." The question was, as stated by Judge Wallace (p. 580), whether defendant infringed by selling rolls of oval paper which they manufactured to persons who bought the paper and fixtures from the complainant, and having used up the paper wished to get more to use with the fixtures. This is the precise question here involved, never presented to any court in this litigation and never passed upon by any court in any form in this litigation before the motion for contempt herein, namely: whether defendant has the right to sell sound-records, an unpatented article of the prior art, for use upon the hundreds of thousands of machines sold, *combined with records*, by complainants and their licensees to purchasers within the United States. *Under Judge Wallace's decision, affirmed by this Court, defendant unquestionably has that right.* Judge Wallace said (p. 580):—

> "In other words, the case is as though the defendants were charged with infringement because they sell rolls of oval paper which

they manufacture to persons who have bought the paper and fixtures from the complainant, and, having used up the paper, wish to get more to use with the fixtures. *The sale of the paper to those who have a lawful right to use the fixture,* and *to use both the fixture and paper together, is not an invasion of the rights of the complainant.* The paper, as an element of the patented invention, is one for *temporary* use only. The fixture proper is a durable device, which is designed to last for many years; while the roll of paper may be completely used up in a few days. *This circumstance repels any inference that the right of a purchaser to use the fixture does not survive the life of the paper. The purchaser who buys a machine or device, patented or unpatented, without any restriction as to the mode or extent of the use to which he may apply it acquires all the rights of the seller and may do with it whatever the seller might have done if he had not parted with it.* He acquires the right to use it, to repair it, and to sell it to others; and those to whom he sells acquire all his rights. If the original vendor is the licensee of the article, a purchase of the article from him is, in legal effect, a purchase from the owner of the patent. *The sale of the article transfers the monopoly right in the article itself without qualification. Holliday* v. *Matheson*, 23 Batchf. 239, 24 Fed. Rep. 185. If the purchaser may lawfully *repair* the article, or *remove a part of it and substitute another*, it is quite immaterial whether he does it by his own hands or *procures another to do it for him;* and if the act when done by himself does not violate the rights of the owner of the patent, it does not when performed by another at his request."

Judge Wallace then pointed out (p. 581) that the law as above stated by him had been distinctly declared by this Court in *Wilson* v. *Rousseau*, 4 How. 647 and in *Wilson* v. *Simpson*, 9 How. 109.

Judge Wallace then distinguished (p. 581) the case of *Cotton-Tie Co.* v. *Simmons*, 106 U. S. 89, as follows;—

> "There the patented article was sold '*licensed to use once only*,' and after it was practically worn out, and the right of the purchaser to use it had terminated, another person, who bought the parts as old iron, *reconstructed* them anew into the patented article. *If in this case the fixtures had been worn out or had in any other way fully subserved the use for which they were intended when sold*, the doctrine of that case would apply."

Judge Wallace then pointed out that the law of contributory infringement had no application to the case. The attention of the court is directed to this holding of Judge Wallace, affirmed by this Court, that the law of contributory infringement had no application to the case, because complainants' counsel based his entire argument, in the Courts below, upon the law of contributory infringement which has no application whatever to the question here involved. Judge Wallace said (p. 581);—

> "The law of contributory infringement has no application to the case. That doctrine rests on the principle that he who concerts with another to do a wrong is an abetter, and equally guilty with the one who actually commits it. Here no wrong has been committed."

The same rule was stated in *Goodyear Co.* v. *Jackson*, 112 Fed. 146 (C. C. A.), where after a full review of the authorities, it was held, as stated in head note 1, that "*contributory infringement cannot be predicated of the rebuilding or replacing of parts of a patented machine by a purchaser for his own use.*"

In the case at bar there was not a particle of proof that defendant after the injunction sold a

sound-record for use upon an infringing machine or to complete an infringing machine; nor did the Circuit Court find that defendant had committed any such violation of the injunction. Complainants' counsel urged the Circuit Court to hold that *because the records sold by defendant might be used on infringing machines, defendant was in contempt;* but the Circuit Court refused to make any such ridiculous finding upon such matter of mere conjecture. This untenable proposition of complainants' counsel, that infringement may be conjectured, has been rejected by repeated decisions of the courts. Judge Wallace emphatically disposed of it as follows (40 Fed. p. 581);—

> "The complainant cannot rely upon the inconclusive statement, elicited upon cross-examination from the defendant Wheeler, to establish a sale by the defendants of paper with fixtures which had not been sold by the complainant. It would be mere guess-work to infer from that testimony that the fixtures thus sold were not originally made and sold by the complainant. The affirmative upon the issue of infringement is with the complainant, and the *onus* of proof is not satisfied merely by showing a state of facts from which infringement may be conjectured."

The Morgan Envelope Company Case in this Court and this Court's Opinion Therein (152 U. S. 425).

The *leading case* upon the question here involved is the decision of this Court in *Wilson v. Simpson*, 9 How. 109, the *principle* of which was applied by this Court in *Morgan Envelope Co.* v. *Albany Paper Co.*, 152 U. S. 425. In connection with these two cases the decision of Mr. Justice Clifford in *Aiken* v. *Manchester Print Works*, 2 Cliff., 435, should be considered, since, as stated by this Court in the *Morgan Envelope Company* case,

Mr. Justice Clifford there correctly pointed out that a purchaser of a patented combination could replace an unpatented ter porary part of the combination but could not make or use such temporary part of the combination in order to replace it, if such temporary part was the subject of a *separate patent*. In *Wilson* v. *Simpson*, and in *Morgan Envelope Co.* v. *Albany Paper Co.*, this Court held that *an unpatented temporary part of a patented combination could be replaced by the purchaser of the combination from the patentee.*

Since the sound-record which forms a temporary part of the combination of the patent in suit is not a patented article, it is clear, under the decisions cited, that the purchaser from complainants and their licensees of the combination of the patent in suit has a legal right to replace the temporary sound-record and to obtain the sound-record from defendant for such purpose. A consideration of the three cases cited will show this to be in accordance with the settled law.

In *Morgan Envelope Co.* v. *Albany Paper Co.*, 152 U. S., 425, this Court stated that three patents were involved, one for a package of toilet paper and two, which were practically the same, for a combination of the package of toilet paper described in the first patent with a mechanism for the delivery of the paper to the user. Upon a consideration of the evidence, this Court held that the first patent for a package of toilet paper was void, and the question was whether the defendants had infringed the other two patents for the combination. It appeared (p. 431) that defendants neither made, sold or used the mechanism to serve out the toilet paper,

> "except as they purchased it of the patentee and *the only acts proven against them were in selling oval rolls of paper of their own*

manufacture with fixtures manufactured and sold by the plaintiff in combination with its (plaintiff's) paper to persons other than the defendants, the *fixtures* having been obtained by defendants from the original purchasers of the patented combination; and *also of selling oral rolls of paper of defendant's own manufacture to persons who had previously purchased fixtures and paper from the plaintiff*, with the knowledge and intention that the paper was sold to be used in connection with the plaintiff's fixtures. In this connection it appeared that *it had not been the practice of the plaintiff to sell its fixtures independently of its paper* and that they sold only to such parties as dealt in and used their paper. * * * It appears to have been its invariable rule to refuse to sell fixtures except to persons also ordering paper."

Upon these facts, which are esentially the facts of the case at bar found by the Circuit Court, this Court said (p. 432);—

"*The real question in this case, is, whether conceding the combination of the oral roll with the fixtures to be a valid combination; the sale of one element of such combination, with the intent that it shall be used with the other element, is an infringement. We are of opinion that it is not.* There are doubtless many cases to the effect that the manufacture and sale of a single element of a combination, with intent that it shall be united to the other element, and so complete the combination, is an infringement. *Saxe* v. *Hammond*, Holmes, 456; *Wallace* v. *Holmes*, 9 Blatchford, 65; *Barnes* v. *Strauss*, 9 Blatchford, 553; *Schneider* v. *Poultney*, 21 Fed. Rep., 399. But we think these cases have no application to one where the element made by the alleged infringer is an article of manufacture perishable in its nature, which it is the object of the mechanism to deliver, and *which must be renewed periodically, whenever the device is put to use.* Of course, if the product itself is

> the subject of a valid patent, it would be an infringement of *that patent* to purchase such product of another than the patentee; *but if the product be unpatentable, it is giving to the patentee of the machine the benefit of a patent upon the product, by requiring such product to be bought of him.*"

Referring to the case of the *Cotton Tie Co.* v. *Simmons*, 106 U. S., 83, 93, this Court said that that case presented "no difficulty whatever," and further said (p. 434);—

> "It is evident that the use of the tie was *intended* to be as complete a destruction of it as would be the explosion of a patented torpedo. In either case, the repair of the band or the refilling of the shell would be a practical reconstruction of the device. *In this case, however, the purchaser of the new roll does precisely what the patentee intended he should do; he replaces that which is in its nature perishable, and without the replacement of which the remainder of the device is of no value.* The replacement is of a product which it is the object of the mechanism to deliver."

As explained *supra*, pp. 5-7, the sound-reproducing apparatus operates upon the sound record, as stated by Judge Wallace, just as the saw operates upon the log or the fixture upon the paper. In each case, when the operation of the machine is finished, *the thing operated on, the record or the log*, must be *replaced* in order to continue the use and enjoyment of the machine. It is as unreasonable to require the purchaser of the sound reproducing apparatus to purchase the *unpatented* records from complainant as to require the purchase of logs or paper from the patentee of the combination of which the log or paper was a part.

Continuing, in the *Morgan Envelope Co.* case,

this Court, referring to the case of *Wilson* v. *Simpson*, then said (p. 434);—

> "The case is more nearly analogous to that of *Wilson* v. *Simpson*, 9 How., 109, in which the invention involved was a planing machine, and the patent sued upon covered the combination with the cutting knives or planes of a pressure roller to effect the planing of the planks. It was proved that one of the machines would last in use for several years, but that its cutting knives would wear out, and must be replaced at least every sixty or ninety days. It was said by Mr. Justice Wayne, (p. 125) that
>
> > '*the right to replace them was a part of the invention transferred to the assignee for the time he bought it*, without which his purchase would be useless to him, except for sixty or ninety days after a machine had been put in use. It has not been contended, nor can it be, that such be a limitation of the assignee's right in the use of the invention.
> >
> > '*If, then, the use of the machine depends upon the replacement of the knives*, (and the assignee could replace them from time to time, as they were needed, during the first term of the patent, *though they are an essential and distinct constituent of the principle or combination of the invention,) frequently replacing them, according to the intention of the inventor, is not a reconstruction of the invention*, but the use only of so much of it as is absolutely necessary to identify the machine with what it was in the beginning of its use, or before that part of it had been worn out.
> >
> > 'The right of the assignee to replace the cutter-knives is *not because they are of perishable materials*, but *because the inventor of the machine has so arranged them as a part of the combination, that the machine could not be continued in use without a suc-*

> *cession of knives at short intervals.* Unless they were replaced, the invention would have been of little use to the inventor or to others.'"

In *Wilson* v. *Simpson*, immediately following the part above quoted from the opinion therein by this Court in the *Morgan Envelope Company* case, this Court further said;—

> "The other constituent parts of this invention, though liable to be worn out, are not made with reference to any use of them which will require them to be replaced. These, without having a definite duration, are contemplated by the inventor to last so long as the materials of which they are formed can hold together in use in such combination. *No replacement of them at intermediate interrals* **is meant** or is necessary. They may be *repaired as the use may require.* With such *intentions*, they are put into the structure. So it is understood by a purchaser, and beyond the duration of them a purchaser of the machine has not a longer use. *But if another constituent part of the combination* **is meant** *to be only* **temporary** *in the use of the whole, and to be frequently replaced, because it will not last as long as the other parts of the combination, its inventor cannot complain, if he sells the use of his machine, that the purchaser uses it in the way the inventor meant it to be used, and in the only way in which the machine can be used.*
>
> *"Such a replacement of temporary parts does not alter the identity of the machine, but preserves it, though there may not be in it every part of its original material.'"*

Clearly in the case at bar the sound reproducing apparatus sold by complainants has no use other than that involving continued replacement of the temporary sound record.

In the *Morgan Envelope Company* case, this Court, after stating that the case was more nearly

analogous to that of *Wilson* v. *Simpson*, and after quoting, as above shown, from the opinion of Mr. Justice Wayne in that case, then said (p. 435);—

> "The true distinction is stated by Mr. Justice Clifford in *Aiken* v. *Manchester Print Works*, 2 Cliff., 435, where the invention was of a knitting machine, with which the vendor was accustomed to send *a package of the needles* used in the machine, which needles were the subject of a *separate patent*. It was held that the purchase of the knitting machine, and the needles accompanying the same, did not confer upon the purchaser any right, after the needles were worn out and became useless, to manufacture other needles, and use the same in the knitting-machines so sold and purchased. The case of *Wilson* v. *Simpson* was distinguished from this in the fact that the cutters and knives in that case were not subject to a patent, and of course the respondent had a right to use them as materials to repair his machine; 'but,' says the court, '*unfortunately for the defendants in this case, the needle is subject to a patent*, and in making and using it they have infringed the right of the plaintiff.' *As we have already held that the paper roll in this case was not the subject of a valid patent, it follows that the defendants cannot be held as infringers for the manufacture and sale of such roll.*"

In *Wagner Typewriter Co. v. Webster Co.*, 144 Fed. 495, Judge Ray cites many of the leading cases sustaining the doctrine of the above cited cases.

POINT TWO.

The Circuit Court of Appeals, following the decisions of this Court, has held that the purchaser of a patented combination has the legal right immediately to substitute for an important or essential element of the combination one which he conceives to be better suited to his purposes, even though such element was intended to be permanent; and that any one has an equal right to make and sell such elements to such purchaser for such purpose (*Thomson-Houston Electric Co. v. Kelsey Co.*, 75 *Fed.* 1005).

(See assignment of errors, Nos. 1, 3, 7, 8, 13, 14, 19, 20, 21, 22, 23, 24, 25, 26, *supra*, p. 54).

In a consideration of this point the following inquiry is pertinent;—

What injury can result to complainants, if a purchaser from them of the combination constituting the sound reproducing apparatus of the patent in suit substitutes in the apparatus a record purchased from defendant for the record purchased from complainants as part of the combination? *Clearly there can be none, as held by this Court in numerous cases, other than complainants' failure to secure a monopoly of the unpatented record, a monopoly to which they are not entitled.* Having received the full consideration for the patented combination, which they sold without restriction, they cannot complain if the purchaser deals with it as he pleases and substitutes in it for one of its elements a like element which he conceives to be better suited to his taste or purposes.

The principle of the decision in the *Thomson-Houston Co.* case is stated in the third head note of the case, as follows (75 Fed. 1005);—

> "One who purchases the apparatus covered by the Van Depoele patent, No. 495,443, for an improvement in traveling contacts for electric railways, *has the right, immediately thereafter, to discard the element known as the 'trolley stand,' and purchase from another a different stand, which he conceives to be better suited to his purposes.* 72 Fed. 1016, modified."

The "trolley stand" was an element of the patented combination.

Judge Shipman, writing the opinion of the court, said (p. 1010);—

> "*If a purchaser from the complainant chooses, the day after his purchase, to substitute a stand which is better made and better adapted to his peculiar needs, he has the right to do so.*"

Judge Wallace, concurring in the principle thus stated by Judge Shipman, but dissenting from the decision of the court since he thought that the decree for injunction should not merely be modified but reversed altogether, said (p. 1011);—

> "*Concededly,* they have a right to repair their trolley stands, to substitute new ones for those old or worn out, or *to substitute a better and improved kind for those originally bought of the complainant.* The defendants have an equal right to make and sell the stands to such owners for that purpose."

The legal principle thus stated by Judges Shipman and Wallace, and concurred in by Judge Lacombe, was embodied in the decision of the court, whereby the order granting the preliminary injunction was modified by adding the following words (p. 1010);—

> "It is not intended to enjoin the defendant against the sale of trolley stands, by way of replacement of broken stands, or stands worn by use or *substitution for trolley stands previously sold by the complainant to purchasers from it*, but this permission does not give authority to reconstruct or rebuild a combination which has been sold by the complainant."

Thus the court recognized not only the right of the purchaser of a patented combination to replace an element that was *broken or worn by use*, but also the right *to substitute* for an element of the combination purchased from the patentee another similar element which the purchaser preferred. In other words, the Court applied the ruling of this Court that the renewal of such a single element of the combination was neither reconstruction nor repair, and was an act within the rights acquired by the purchase of the patented combination.

As pointed out by Judge Wallace (con. rec. p. 95), Judge Hough's opinion (p. 93), is in direct conflict with this previous decision of the same court. The court squarely held that the substitution of the trolley stand in the combination was *not* a reconstruction or rebuilding of the combination and this holding Judge Hough entirely overlooked.

This *right of substitution* is clearly a broader right than the right to repair. Judge Shipman, moreover, pointed out that this right of substitution extends not merely to the replacing of fragile elements, whose life is necessarily short, but also to the replacing of an *important element which was intended to be permanent* (pp. 1008-1009); and that the right of substitution or replacement existed even "though it shall be a replacement of an *essential part of a combination*" (p. 1009), cit-

ing and quoting *Wilson* v. *Simpson*, 9 How. 109, where, as stated *supra*, p. 77, this Court held that the right of substitution extended to

> *"an essential and distinct constituent of the principle or combination of the invention."*

Referring to the decision of this Court in *Wilson* v. *Simpson*, Judge Shipman also said (p. 1009);—

> "The *distinction* which the court was endeavoring to point out, and which it thought was well illustrated in the Woodworth planer, was the difference between *the repair or replacement of a single element of a combination*, and *the manufacture of a new machine in place of one which had become useless.*"

The manufacture of a new machine is, of course, reconstruction and not within the rights of the purchaser, from the patentee, of a machine which has become useless; but *the repair or "replacement" of a single element of the patented combination is not reconstruction and is within the rights of the purchaser.*

Replacement is to be distinguished from repair. As this Court said in the *Morgan Envelope Co.* case the *replacement* of the paper in the fixture was neither *reconstruction* nor *repair* (*supra*, p. 6). *This important principle was entirely overlooked by Judge Hough.*

If the purchaser of the patented combination had the right, "*the day after his purchase*," to purchase a new trolley stand and to substitute it for the trolley stand of the combination purchased from the patentee, it is clear that in the case at bar the purchaser, from complainants or their licensees, of the combination forming the sound reproducing apparatus of claim 35 of the patent in suit had the right to substitute for the record of the combination purchased from complainants or their licensees any other record which

he desired to substitute, and that defendant had an equal right to make and sell records to such purchaser for that purpose.

Judge Shipman, in his opinion (p. 1008) distinguished the cotton-tie case (*Cotton-Tie Co.* v. *Simmons*, 106 U. S. 89) and the carbon-filament case (*Davis El. Works* v. *Edison El. Light Co.*, 60 Fed. 276), upon the ground that those were cases of *reconstruction* of the patented combination, *having no analogy to the repair or replacement of a single element of a combination.* This distinction of the cotton-tie and carbon-filament cases, so uniformly made by the courts, has been fully dealt with under Point One of this brief (*supra*, pp. 64, 66, 76). In view of the decision of the court in the trolley stand case, now under consideration, it becomes still more clear that Judge Lacombe erred when, in his opinion in the case at bar, he cited the carbon filament case in support of the proposition that a purchaser had *not the legal right to substitute a new record* purchased from defendant for a record purchased as part of the patented combination from complainants or their licensees. The learned Circuit Judge stated that such substitution was not, in any legitimate sense, "repairs," because, he said, the new records were purchased more frequently in order to increase the repertory of tunes than as substitutes for worn out discs. Judge Lacombe, like Judge Hough, overlooked the holdings of this Court that *replacement* is neither *reconstruction nor repair* (*supra*, p. 6), and thus erroneously limited the right of a purchaser of a patented combination to "repair" and erroneously held that what is not "repair" must be "reconstruction." This holding of the learned Circuit Judge involved *three fundamental errors.*

(a) Judge Lacombe overlooked entirely the pur-

chaser's *right of substitution or replacement* of the single element, namely, the record, of the combination forming the sound reproducing apparatus.

(b) Judge Lacombe overlooked entirely the purchaser's right *to improve, as he pleases*, upon the purchased patented combination.

(c) Judge Lacombe *conceded* that the original record of the combination purchased from complainants or their licensees *became worn out*, and then denied to the purchaser of the combination from complainants or their licensees, the undoubted *right of repair*, which the purchaser could clearly exercise by substituting a new record for the original worn out disc. *In order to make such substitution, the purchaser of the combination must be at liberty to make or to buy as many new records as he chooses and to use any one of them, at any time, in lieu of the original record sold by complainants or their licensees as part of the patented construction.* Complainants assert that they sell the patented combination with such intention and subsequently sell many of the unpatented records that they may be so used.

The *right of replacement or substitution* is a right which the purchaser of a patented combination may exercise *at any time* and *in any manner he pleases* and *for any reason* that may be sufficient to him. Judge Shipman says he may exercise it the day after his purchase; if so, he may exercise it *immediately* upon his purchase. He may exercise it not because his trolley stand or other *unpatented* element is broken or worn out by use, but because *he likes some other trolley stand better.* So the purchaser from complainants or their licensees of the sound reproducing apparatus forming the combination of the patent in suit, may exercise his right of substitution or replacement

of the *unpatented* sound record at any time and for any reason. As Judge Wallace said in the case at bar "he can discard a part he does not care to use and substitute another" (con. rec. p. 95).

The right of substitution is a right supported by an unbroken line of decisions of this Court. Judge Shipman referred (p. 1008) to *Chaffee* v. *Belting Co.*, 22 How. 217. In the *Chaffee* case Mr. Justice Clifford, writing the opinion of this Court, pointed out (p. 223) that *the purchaser of a patented machine acquires the machine free from the monopoly of the patent, and in using the machine exercises no rights created by the act of Congress.* By purchase, the patented machine becomes *the indiridual property of the purchaser* and is subject no longer to the laws of the United States, but is subject only to the laws of the State in which it is situated. Hence the purchaser may use it, repair it and *improve upon it*, as he pleases. In explanation of this principle, Mr. Justice Clifford said (p. 223);—

> "That rule rests upon the doctrine that the purchaser, in using the machine under such circumstances, exercises no rights created by the act of Congress, nor does he derive title to it by virtue of the franchise or the exclusive privilege granted to the patentee.
>
> "*When the patented machine rightfully passes to the hands of the purchaser from the patentee*, or from any other person by him authorized to convey it, *the machine is no longer within the limits of the monopoly.* According to the decision of this court in the cases before mentioned, it then *passes outside of the monopoly*, and is *no longer under the peculiar protection granted to patented rights.* By a valid sale and purchase, the patented machine becomes *the private individual property of the purchaser*, and is no longer protected by the laws of the United

> States, but by the laws of the State in which it is situated. Hence it is obvious, that if a person legally acquires a title to that which is the subject of letters patent, *he may continue to use it, until it is worn out, or he may repair it or improve upon it, as he pleases, in the same manner as if dealing with property of any other kind.*"

In *Wilson v. Simpson*, quoted *supra*, p. 78, this Court said;—

> "Such a *replacement* of temporary parts does not *alter the identity* of the machine, but *preserves* it though there may not be in it every part of its original material."

Upon the same point, Judge Wallace said in the case at bar (con. rec. p. 95);—

> "He (the purchaser) is not under any implied promise *to maintain the machine as an entity* and may do whatever he chooses with any of the parts, as fully as if there had not been a patent."

In a later case, *Mitchell v. Hawley*, 16 Wall., 544, 548, Mr. Justice Clifford, again writing the opinion of the court, quoted with approval the part above quoted from the *Chaffee* case, and in addition held (p. 546), that patentees are "*entitled to but one royalty for a patented machine*," and that when they have sold the patented machine *without any conditions* and the consideration has been paid, they must be understood to have *parted with all their exclusive rights* and to have *ceased to have any interest whatever in the patented machine* so sold.

Hence arises the right of the purchaser to use the machine until it is worn out, to repair it and to *improve* upon it *as he pleases* in the same manner as if dealing with property of any other kind.

Clearly under the decisions of this Court, complainants in the suit at bar can have no right what-

ever to dictate what sound record shall be used by those who purchased from them, without restriction, the sound-reproducing apparatus of the patent in suit, for the sound record is an unpatented article.

In *Bloomer* v. *McQuewan*, 14 How. 539, 549, Mr. Chief Justice Taney said;—

> "When a machine passes to the hands of the purchaser, it is no longer within the limits of the monopoly. It passes outside of it, and is no longer under the protection of the act of Congress."

In *Adams* v. *Burke*, 17 Wall. 453, 456, it was held, on the authority of the *Bloomer* case, that when patented machines "are once lawfully made and sold, there is no restriction on their *use* to be implied for the benefit of the patentee or his assignees or licensees." Mr. Justice Miller writing the opinion of the court in *Adams* v. *Burke* also said (p. 456);—

> "But, in the essential nature of things when the patentee or the person having his rights, sells a machine or instrument whose sole value is in its use, *he receives the consideration for its use*, and *he parts with the right to restrict that use*. The article, in the language of the courts, passes without the limit of the monopoly (*Bloomer* v. *McQuewan*, 14 Howard, 549; *Mitchell* v. *Hawley*, 16 Wallace, 544). That is to say, the patentee or his assignee having in the act of sale received all the royalty or consideration which he claims for the use of his invention in that particular machine or instrument, it is open to the use of the purchaser without further restriction on account of the monopoly of the patentees."

In *Edison El. Light Co.* v. *Peninsular Co.* 101 Fed. 831, 835, 837 (C. C. A.), it was held, citing *Adams* v. *Burke*, that the vendee, of apparatus adapted for use according to the system of distri-

bution covered by an Edison patent, had the legal right to take the electric current from another than the vendor.

In *Hobbie* v. *Jenison*, 149 U. S., 355 and *Keeler* v. *Standard Folding Bed Co.*, 157 U. S., 659, it was held, following *Adams* v. *Burke*, as stated in the latter case, that

> "one who buys patented articles of manufacture from one authorized to sell them becomes possessed of *an absolute property* in such articles, *unrestricted in time or place*."

and that the absolute property of the purchaser includes the *unrestricted* right to *sell* as well as *unrestricted* right to *use*.

Judge Ray has collected several of the leading cases upon the *unrestricted right to use* in *Daimler Co. v. Conklin*, 160 Fed. 679.

The clear result of the authorities is that the patented sound reproducing apparatus, forming the combination of claim 35 of the patent in suit, passes out of the monopoly of the patent and the protection of the patent laws of the United States when sold unconditionally by complainants or their licensees. Complainants having received the consideration or royalty for the patented combination can claim no further interest therein and no restriction whatever can be implied on the use thereof in favor of complainants or their licensees. The purchaser acquires the right to deal with the sound reproducing apparatus as his individual property, free from the monopoly of the patent and free from the patent laws of the United States, and he may repair it and improve upon it in the same manner as if dealing with property of any other kind. Neither complainants nor their licensees can claim *a further royalty* or consideration, nor can they, by an attempt to restrict the use of the patented combination which they un-

conditionally sold and for which they received the full consideration, *secure a monopoly of the unpatented sound-record.*

Thus, the owner's *right of substitution* of a single element of a patented combination, purchased unconditionally from the patentee, is established by an unbroken line of decisions. This right of *substitution* includes the rights *to improve, to replace, to renew and to repair.*

POINT THREE.

The argument of complainants' counsel is based upon overruled cases.

The court will find the argument of complainants' counsel concisely stated in two overruled cases, viz;—*Thomson-Houston Co.* v. *Kelsey Co.*, 72 Fed. 1016 (C. C., Townsend, D. J.), *modified* 75 Fed. 1005 (C. C. A., Wallace, Lacombe and Shipman, C. J J.); and *St. Louis Co.* v. *Shickle Co.*, 70 Fed. 783 (C. C., Adams, D. J.), *reversed* 77 Fed., 739 (C. C. A., Caldwell, Sanborn and Thayer, C. JJ.).

In the *Thomson-Houston Co.* case, *supra*, Judge Townsend held that the trolley stand was "probably the most substantial, if not the chief, element in the patented combination"; and that it did not wear out quickly or break frequently (72 Fed. 1017). For these reasons Judge Townsend held that the principle of the *Morgan Envelope Company* case did not apply to the replacement of the trolley stands (p. 1018). Because the trolley stand was permanent and not temporary, Judge Townsend said that the replacement or substitution of the trolley stand was reconstruction and not repair (p. 1019). Clearly Judge Townsend's reasoning is the argument of complainants' counsel in its

entirety. The Circuit Court of Appeals held on appeal (75 Fed. 1005) that Judge Townsend was in error. Judge Townsend relied upon and cited Judge Wallace's opinion in *Travers* v. *Beyer*, 26 Fed. 450, also cited by complainants' counsel (brief, C. C. A., p. 125) and upon Judge Adams' opinion in *St. Louis Co.* v. *Shickle Co.*, *supra*, reversed in the Circuit Court of Appeals, as above pointed out.

In *Travers* v. *Beyer*, *supra*, the defendant made and sold an essential element of the patented combination to persons *who had not purchased the combination* from the patentee, but who combined the element purchased from defendant with the other elements, thus *making* the combination and infringing the patent. The element sold by defendant was of necessity to be used for the purpose of infringing the patent. This was a clear case of contributory infringement, having no analogy to the case at bar.

In *St. Louis Co.* v. *Shickle*, *supra*, Judge Adams held that the "knuckle" made and sold by defendant was the chief element (70 Fed. 785), and a permanent element, which it was not necessary frequently to replace (p. 786). For these reasons Judge Adams held that the principle of *Wilson* v. *Simpson*, *Chaffee* v. *Belting Co.*, *Morgan Envelope Co.* v. *Albany Paper Co.*, etc. did not apply and that the substitution of the knuckle by a purchaser from defendant in the combination purchased from the patentee was reconstruction and not repair (p. 785). The Circuit Court of Appeals held this to be error (77 Fed., 739). Although the knuckle was an important element of the patented combination and utterly useless except in the combination (p. 741), and although the knuckle was not a temporary element, nevertheless, since the knuckle was not claimed separately and was not

in itself a patented article (p. 743), the Circuit Court of Appeals held that defendant did not infringe the combination claim of the patent by making and selling the knuckles thereof to persons who had purchased the combination from the patentee and who, by such purchase had acquired the right to make and to use such knuckle for the purpose of repairing the purchased, patented combination (p. 743). The Circuit Court of Appeals pointed out that the testimony showed, as in the case at bar, that defendant's sales were made only to persons who had purchased the patented combination from the patentee and had, therefore, the right to use it; and, as in the case at bar, that there was no evidence showing that the purchasers from defendant used the purchased element for any purpose other than a repair. Hence, it was held that complainant failed to prove infringement.

The case at bar is much stronger than *St. Louis Co. v. Shickle, supra*, because it is *intended* by complainants that the sound record shall constantly be renewed in the use of the sound reproducing apparatus, which is constructed in such manner that a new sound record is to be inserted in and removed from the apparatus each time the apparatus is put to use. *In such case the distinction between reconstruction and repair becomes of no value, because, as this Court said in the Morgan Envelope Co. case, the renewal of the record is neither the one nor the other* (*supra*, p. 6). It is the use of the sound reproducing apparatus in the only way in which it can be used, and the purchaser acquired the right so to use the apparatus when complainants sold it to him.

In *Thomson-Houston Co. v. Kelsey Co., supra*, the court on appeal (75 Fed. 1005) conceded that the trolley stand was an important member of the patented combination which was intended to be

permanent and held that the purchaser of the patented combination from the patentee had the right *not only to repair* the patented combination by substituting a new trolley stand, not purchased from the patentee, by way of replacement of broken stands, or stands worn by use, *but also under the decisions of this Court, to substitute immediately a new trolley stand*, not purchased from the patentee, for the trolley stand purchased as part of the patented combination from the patentee.

It is clear that the substitution of a single unpatented and unpatentable element, though it be an important and essential and permanent element of the patented combination, is not reconstruction, but is within the right of the purchaser from the patentee of the patented combination. What difference can it make to the patentee, whether one who has purchased from him the patented combination and paid to him the consideration or royalty therefor, continues to use as part of the combination every purchased element thereof, or substitutes for one element an equivalent unpatented element purchased from some other person? The patentee of the combination is not entitled to royalty for the unpatented element and if he has received the royalty due him for the combination, he has no reason to complain, because the purchaser substitutes in the purchased combination an element better suited for his purposes. As Judge Wallace said in the case at bar (con. rec. p. 95);

> "*He (the purchaser) is not under any implied promise to maintain the machine as an entity and may do whatever he chooses with any of its parts, as fully as if there had not been a patent*" (cf. *Chaffee v. Belting Co.*, 22 How., 217, *supra*, p. 86; and *Wilson v. Simpson*, *supra*, p. 87).

Complainants attempt to secure a monopoly of the unpatented record, and to exact tribute for the record from those who have paid to complainants the consideration for the patented combination, is without any support whatever in the law and is manifestly an attempt to obtain tribute to which they are not entitled.

POINT FOUR.

Judge Hough's opinion in the Circuit Court of Appeals is clearly in conflict with the controlling decisions of this Court and with the decision of the Circuit Court of Appeals in Thomson-Houston Co. v. Kelsey Co., 75 Fed. 1005. Judge Wallace's opinion is correct and in accordance with the well settled law.

Judge Wallace's opinion is to be found at page 94 of the contempt record. It was, it is believed, the last opinion written by the learned Judge before he left the Federal bench after an experience in patent causes extending over a period of more than thirty years.

Judge Hough's opinion is to be found at page 90 of the contempt record. It was the first opinion, it is believed, which the learned Judge was called upon to write in a patent suit in the Circuit Court of Appeals.

It is respectfully submitted that the logic of Judge Wallace's opinion is unanswerable and that the principles of patent law enunciated by Judge Hough conflict with the decisions of this Court and of the Circuit Court of Appeals following the decisions of this Court.

Judge Wallace's Opinion.

Referring to Judge Wallace's opinion, it appears that after stating that claim 5 is void upon its face, he assumed it to be valid and said that it is not infringed except by using the combination or machine of claim 35. Judge Wallace then pointed out;—

> "A sound record is one of the parts enumerated in claim 35. It is, however, only *a subsidiary part* of the machine. Its relation to the machine proper is analogous to that of the sheet of paper in a typewriting machine, or the stalks of corn in a corn cutter. *It is a thing which is to be operated on by the machine proper.*"

In further explanation of the character of the sound record as a part of the machine, Judge Wallace, after stating the well settled rules of law applicable to the facts, said (p. 95);—

> "Let us consider from a practical standpoint what any other rule would lead to in a case like the present. The purchaser here has bought with his machine a sound-record, or half a dozen sound-records, each having the necessary grooves cut in it to enable him to reproduce for his own pleasure a particular piece of music. *The record is a fragile thing* which is to be *inserted* into the machine by the user, and must be *adjusted* accurately to the vibratory parts, and is to be *removed* when he wants to reproduce a different piece of music. *Any slip of the hand will destroy it.* Not only is this so, but *its sound producing qualities are lost by the contact of the needle which is vibrated in its grooves long before the machine proper is worn out, and generally early in its normal life.* Whenever either of these things happens, a machine, which costs at least seventeen dollars, is disabled unless a record like one which has been sold with it at the price of 35 cents, and *which anybody and everybody has a right to make*, may be *replaced* in the machine in lieu of the useless one."

Unquestionably Judge Wallace's statement in the case is correct. The sound record is a temporary element of the sound reproducing apparatus made and sold by complainants, and it is intended, as well as necessary, that the purchaser shall, in order to enjoy and use the purchased machine, frequently and periodically *renew* or *replace* the sound record of the machine. To do this is the very object for which he purchased the machine. A typewriting machine is sold and purchased with the intention that the sheet of paper operated upon shall be constantly renewed; a corn cutter, a sewing machine, a planing machine or a toilet fixture with the intention that the stalks of corn, logs, cutting knives, or rolls of paper, forming parts of the combinations, shall frequently and periodically be replaced. The question is not one necessarily of *reconstruction* or *repair*, for it has a broader basis, under the decisions of this Court, and has to do with the right of the purchaser of a patented combination *to replace or renew* those temporary parts of the combination which, in the reasonable use and enjoyment of the machine, he must replace if he is to use the machine in the manner for which it is arranged and for which it was sold and purchased.

Judge Wallace pointed out that it clearly appears by the opinion in the suit, in which the validity of the patent was established, that *the invention of the claims 35 consists in the universal joint or swinging arm*, and that *everything else in the machine was old, including the sound record*. Judge Wallace then stated with precision the real question in this case. He stated it precisely as he stated it, with the approval and affirmance of this Court, in the *Morgan Envelope Company* case. The learned Judge said (p. 94);—

> "It is not questioned and cannot be, that the plaintiffs in error were *at complete liberty to make and sell such sound records as they did*,

provided they did not sell them to purchasers who had no right to use them in combination with the other devices enumerated in claim 35. They have been adjudged guilty of contempt because they have sold them, or threatened to sell them, to users of the so-called "Victor" machine which embodies the combination, and who purchased their machines from the Victor Talking Machine Company, the owner of the patent. *If these purchasers were at liberty to remove a sound record which originally accompanied the machine, and substitute for it a sound record sold by the plaintiffs in error, they were not infringers;* and plainly the plaintiffs in error could not be infringers by assisting the purchasers to do that which they had a right to do. *The real question in the case therefore is whether the purchasers of the Victor machines infringe the patent by using in their machine the sound records manufactured by the plaintiffs in error.*"

Thereupon Judge Wallace, following clearly the opinions of this Court in *Chaffee* v. *Belting Co.*, 22 How., 217; *Wilson* v. *Simpson*, 9 How. 109; *Morgan Envelope Co.* v. *Albany Paper Co.*, 152 U. S., 425 and 40 Fed. 577, where he wrote the opinion in the Circuit Court, and the decision of the Circuit Court of Appeals in *Thomson-Houston Co.* v. *Kelsey*, 75 Fed. 1005, and the other leading authorities cited and quoted under Points One and Two of this brief, stated the rule of law applicable to the facts in the case at bar as follows (pp. 94-95);—

"*The purchaser of a patented machine from the owner of the patent acquires the right to do what he may choose with the particular machine, or any of its parts, as freely as he could if it, or none of its parts, had never been patented.* Undoubtedly he cannot, after his machine has practically ceased to exist for any useful purpose, reconstruct it by reparation, nor can he then reconstruct it by disorganizing it and substituting as new parts the dominating and

vital features of the patented invention. *But no question of this kind is involved in the present controversy. The only question is whether he can discard a part he does not care to use and substitute another.* When such a part is not the fundamental invention in the patented machine, *I cannot doubt he is at liberty to do so.* This was so decided by this Court in the 'trolley stand' case (*Thompson Houston Co. vs. Kelsey Co.*, 75 F. R., 1005), and is *not an open question* in this court, unless it is proposed to reconsider and overrule that decision. *He is not under any implied promise to maintain the machine as an entity and may do whatever he chooses with any of its parts, as fully as if there had not been a patent.*"

In the consideration of the case from a practical standpoint, Judge Wallace added (p. 95);—

> "If the owner of the patent stops manufacturing records, or no longer has in the market a record grooved like the one which has been destroyed, what is the purchaser to do if he has not the right to replace a record without the permission of the patent owner? The purchasers of the Victor machine cannot require the Victor Talking Machine Company to supply them with records, and can only procure them from it on such terms as it pleases to exact. *If they are not at liberty to procure them elsewhere, the company can dictate how long they are to enjoy the use of their machines.*"

In conclusion Judge Wallace pointed out that there was *no precedent* for the rule of infringement adopted by the majority, saying (p. 95);—

> "*Such a rule of infringement as is adopted by the majority opinion, not only extends the monopoly of the patent owner to an unprecedented extent*, but is *subversive of the right of a purchaser of the patented thing to realize its fair measure of usefulness by making neces-*

sary reparations or changes by way of improvement."

Judge Hough's Opinion.

A consideration of Judge Hough's opinion shows that it is in conflict with the authorities. As Judge Wallace said, the question here involved was decided in favor of this petitioner by the Circuit Court of Appeals for the Second Circuit in *Thomson-Houston Co.* v. *Kelsey Co.*, 75 Fed. 1005, and that the question was not an open question unless it was proposed to reconsider and overrule that decision. Clearly Judge Hough has attempted to overrule that decision. In his opinion, Judge Hough says (p. 93);—

> "The final contention against the order below, admits that the record actuating the stylus is a vital part of the combination claims of the patent in question; but declares that any purchaser of the patented article may immediately *substitute* for even an essential element therein, any other element which he conceives better suited to his purpose; *and of course if this be true such preferred elements may be freely manufactured and sold.*
>
> We think this contention disposed of by Thompson-Houston, etc. Co. *vs.* Kelsey, etc., Co., 75 F. R., 1005; for the right of substitution there recognized was specifically restricted so as to refuse 'authority to reconstruct or rebuild a combination which has been sold by the complainant;'—and whenever a Leeds & Catlin record is placed in a Victor machine the patented combination is instantly reconstructed."

We have seen that this court held in *Wilson* v. *Simpson* that the right to replace a temporary element of a patented combination extends to *"an essential and distinct constituent of the principle or combination of the invention"* (*supra*, p. 77).

The cutting-knives were essential elements of the planing machine. The toilet paper was an essential element of the toilet fixture. The trolley stand was an essential element of the patented combination in the *Thomson-Houston Company* case.

The rule of law is, as contended for by this petitioner. It was recognized and stated by the Circuit Court of Appeals in the *Thomson-Houston Company* case, for the court there said that the defendant was not enjoined against the sale of trolley stands for "*substitution for trolley stands previously sold by the complainant to purchasers from it*" (*supra*, p. 82). In other words, the court held that substituting one trolley stand for another trolley stand *in the patented combination* was *not* a reconstruction or rebuilding of the combination. As this Court said in the *Morgan Envelope Company* case (*supra*, p. 6), the *renewal* of a temporary part of a patented combination is *neither repair nor reconstruction*. In the trolley stand case the right to substitute in the patented combination a new trolley stand for the one sold by the patentee as part of the combination was recognized, although the trolley stand was a permanent, important and essential part of the combination (*supra*, pp. 81-82). It was, however, unpatented, like the sound record in the case at bar, and did not, therefore, embody the vital elements of the *invention* and in this respect it is like the sound record, for the sound record, concededly, belongs to the prior art.

Judge Hough concedes that the right of substitution is a right pointed out by this Court in *Chaffee v. Belting Co.*, 22 How. at page 223, and that it is different from the right to repair. It is not clear whether Judge Hough regards the right of substitution as being the same as the right to improve, both of which rights he admits exist under

the decision of this Court in the *Chaffee* case. Judge Hough says that the right of substitution rests upon the right to improve, but then he adds that there is here no true substitution, and improvement is scarcely pretended. In this statement, substitution seems to be differentiated from improvement. Clearly the learned Judge was in error. The substitution of a new record for a record sold by complainant as part of the patented combination is clearly within the right of substitution and within the right to improve. That must be an improvement in the patented combination which is desired by the person making it. No truer case of lawful substitution could be found than the substitution of one record for another in a sound reproducing machine, for the machine is sold and purchased with the *intention* that it shall be used for reproducing sound from records which the purchaser is expected to secure from time to time, and which he must secure from time to time if he is to use and enjoy the purchased machine.

Upon the question of infringement Judge Hough said (p. 91);—

> "Upon these facts it is clear that the Leeds & Catlin Company have made and sold a single element of the claims of the Berliner patent, with the intent that it should be united to the other element and complete the combination;—and this is infringement (Heaton Peninsular, etc. Co. *vs.* Eureka Specialty Co., 77 F. R., at 297; adopted by this Court, Cortelyon *vs.* Lowe, 111 F. R., 1005)."

Judge Hough evidently overlooked the fact that in the later case of *Cortelyon v. Johnson*, 145 Fed. 933 (S. C. 207 U. S. 196), the Circuit Court of Appeals for which he was speaking repudiated the decision of the *Heaton-Peninsular Company* case and thus overruled *Cortelyon v. Lowe*. The fasten-

ers of the *Heaton-Peninsular Company* case were *unpatented* articles.

It would, indeed, be difficult to see what connection exists between the facts of the case at bar and the decision of the *Heaton-Peninsular Company* case. In that case the owner of a patent for a machine sold the machine *subject to a condition or restriction* that it should be used only with fasteners made by the seller. Whether the decision in the *Heaton-Peninsular Company* case is good law or not, has been left an open question by this Court in *Cortelyou* v. *Johnson*, 207 U. S., 196 (see other cases cited *infra*, p. 112). In the case at bar complainants sold their sound reproducing machines combined with records *without any restriction whatever*, so that the principle of *Morgan Envelope Co.* v. *Albany Paper Co.*, *supra*; *Wilson* v. *Simpson*, *supra*; *Chaffee* v. *Belting Co.*, *supra*; *Thomson-Houston Co.* v. *Kelsey Co.*, *supra*; and other cases hereinbefore referred to applies.

In the *Heaton-Peninsular Company* case the Court expressly said (77 Fed. 300):—

> "In the case at bar *the purchaser expressly agreed, by contract*, that his right to use the machine should not extend beyond its use with staple fasteners furnished by the patentee, and *this makes the broad distinction between the Morgan Envelope Co. case and the case at bar.*"

The other case, *Cortelyou* v. *Lowe*, cited by Judge Hough, is a mere memorandum decision adopting the *Heaton-Peninsular Company* case.

The making and the selling of a single element of the claims of the Berliner patent with the intent that it shall be united to the other element and complete the combinaion is clearly, as pointed out by Judge Wallace, not an infringement of the claims of the patent if the purchasers of complainants'

machines possess the right to remove a sound record which originally accompanied the machine and substitute for it a sound record thereafter purchased by them. The machines having been sold by complainant *without restriction*, purchasers from complainants of their machines undoubtedly have such right.

Judge Hough finds that "*disc records are fragile, i. e., brittle and easily broken.*" He says, however, that they are not perishable in the sense that they do not decay. They are perishable, however, in the sense that they are fragile and easily broken and are worn out by use. Judge Hough says that the records are not temporary in the sense that they are not intended to endure. He *believes* that they usually last as long as does the vogue of the songs they record—*a very limited time indeed.* The record would not last even that length of time if repeatedly used. As shown by the evidence, a record can be played from 15 to 60 times (*supra*, p. 32). Even complainants' experts do not claim that the repetitions of sound from a record can exceed 250 to 300 times. If a record is *used* it may last a day or week, possibly longer, depending entirely upon the number of times it is used each day.

Complainants were held to have infringed letters patent of the United States No. 688,739, of December 10, 1901, to Joseph W. Jones (151 Fed. 595), as fully explained at page 4 of petitioner's brief on the injunction branch of this suit, No. 80. Jones in his patent No. 604,829, of May 31, 1898, to be found at page 44 of the contempt record, has explained fully just how the sharp, steel needle of complainants' machines destroy the sinuosities of complainants' records manufactured in accordance with his (Jones') process. In that patent Jones says (con. rec., p. 44, lines 35-51);—

> "In all reproducing apparatus of the above type, as far as I am aware, *a long arm has been employed to support the sound-box and stylus*, and where it has been desired to intensify the sound *a horn* in like manner has thereby been supported and carried, the movement imparted to the arm sound-box and horn being effected by the *delicate-groove* of the record working in conjunction with the stylus. It frequently happens that the sinuosities of the record leave *very delicate partition-lines* between the volutes of said record, so that after *several reproductions* the grooves are caused *to run together* by the friction of the stylus, thus preventing a complete and perfect reproduction of the sound-waves recorded upon the record."

The evidence disposes of the learned Judge's "belief."

Judge Hough, however, has given too limited a meaning to the word "temporary." A temporary part of a patented machine, under the decisions of this Court, is a part which it is *intended* shall frequently and periodically be replaced or renewed. If the patentee constructs his machine so that one element can and must frequently be replaced or renewed in the use of the machine, and sells the machine intending that the purchaser shall thus use it, *the right of the purchaser thus to use the machine arises from the manner in which it is made and the intention with which it is sold* (*Wilson* v. *Simpson*, *supra*, (pp. 62, 77). The learned Judge admits that a rifle bullet and probably a cartridge shell are perishable and temporary parts of the combination of rifle and ammunition, but he doubts that the missile of a toy gun is a perishable or temporary part. It may be broken or it may be lost or mislaid. It may become worn by use. It may also not be suited for the purposes of the boy gunner. Unquestionably, within the principle of

the decided cases, *if the missile of the gun is not in itself a patented article*, the purchaser and user of a patented combination consisting of the gun and the missile, would have the right to renew the missile as often as he chooses. But even this case is not the case at bar, because in the case at bar complainants sold their machines with the *intention* that the purchaser should replace the record, and that intention, under the decisions of this court, gives to the purchaser the right to renew the record because *that right was part of what he purchased.*

In answer to petitioner's argument, that those who purchase the patented combination in question without restriction have the lawful right to provide themselves with unpatented records made by any person whatever for the purpose of replacement and repair, Judge Hough concedes the right to repair, and then at once destroys the right by holding petitioner in contempt for having sold records to persons who had purchased complainants' machines.

POINT FIVE.

No question of contributory infringement is here involved. Judge Shipman's decision in Am. Graph. Co. v. Leeds, 87 Fed. 873, cited by the Circuit Court bears no analogy to the case at bar. Judge Grosscup's opinion in Am. Graph. Co. v. Amet, 74 Fed. 789, supports petitioner's contentions.

(See assignment of errors, Nos. 14, 17, 18, 19, 25, *supra*, p. 54).

Judge Shipman in the case above cited followed Judge Grosscup's decision in *Am. Grap. Co. v. Amet*, 74 Fed. 789. Both were cases of *infringe-*

ment. The patent there in suit was the Bell & Tainter patent No. 341,214, of May 4, 1886 (inj. rec. p. 387), of which claims 22 and 24, especially, were relied upon. Those claims covered the *combination of a sound record and a reproducer.* It appeared in each case that the *defendant* manufactured and sold the *reproducing mechanism* or graphophone machine of the combination claimed in the patent. Purchasers of defendant's machines combined them with the other element of the combination, namely the record, which they purchased from the patentee, and thus *made and completed the combination of the patent.*

If, in the toilet paper case (*supra*, p. 73) the *defendant* had made and sold the *fixtures* of the patented combination of which the paper was a temporary element and the purchasers of the fixtures from the defendant had combined them with paper purchased from the patentee; or if, in the planing machine case (*supra*, p. 77), the *defendant* had made the *machine* (without the cutter knives) of the patented combination of which the cutter knives were a temporary element and had combined it with cutter knives purchased from the patentee; or if, in the case at bar, defendant had made and sold the sound reproducing apparatus (without the record) and purchasers of such apparatus from defendant had combined it with records purchased from complainants; in all such cases the facts would have been the same as, or analogous to, the facts in the *Leeds* and *Amet* cases decided by Judges Shipman and Grosscup and the defendants would have been guilty of infringement.

The clear distinction, therefore, between the *Leeds* and *Amet* cases on the one hand and the case at bar, the toilet paper case and the cutter knives case on the other, *is that in the former there was no sale by the patentee of the combination of the pat-*

cut, while in the latter there was. Hence in the former the purchaser of the machine from the defendant and of the record from the patentee acquired no right at all to the *combination* and, therefore, no right to repair, replace, substitute or improve upon any element of the combination; while in the latter the purchaser of the *complete combination* from the patentee acquired all such rights.

The decisions of Judges Shipman and Grosscup are clear authorities in support of defendant's position in the case at bar. Judge Grosscup clearly recognized and stated the undoubted right of a purchaser from a patentee of a sound reproducing apparatus, forming a patented combination of which a record is an element, *to replace the record*, originally purchased as part of the combination, *by a new record*, and such right, he clearly indicated, would exist *whatever the purpose of replacement or substitution might be*, whether to replace a record old, broken, scratched or worn out by use, *or to substitute merely one record for another*, as in the trolley-stand case (*supra*, p. 81), where Judge Shipman, speaking for the Court, said that a purchaser of the patented combination of which it was a part, could substitute a new trolley stand for one purchased from the patentee immediately upon the purchase of the combination. Judge Grosscup said (*Am. Graph. Co.* v. *Amet*, 74 Fed. 789, 791);

> "It appears, however, that these *records* are sold by complainant on the open market, and it is contended that such sale releases this element of the combination from the monopoly of the patent. I do not concur in this view. To make the graphophone more widely useful, the complainants make many records, embodying music, speech, and other sounds, and distribute these, by sale, to the users of the phone. But the record thus distributed remains an in-

tegral part of the combined mechanism. It is not a product of the machine, but still a part of it. *It is not unusual, in many mechanisms, that some elements of their combination must be more frequently renewed than others. The sale of such parts, segregated from the machine, is only the replenishing of the combination by a substitution of a new element for the one worn out.* Such action does not break the patentability of the combination. *So, in this combination, substitution by sale of one or many records for another though not due to the same necessity, ought to receive the same consideration.* The keys of a piano may be replaced without releasing the combination of which the keys are an element from the monopoly of a patent. I can see no reason why the record of a graphophone may not, though for a different purpose, be likewise *replaced* without breaking the validity of the combination."

The logic of Judge Grosscup's opinion unquestionably supports defendant's position in the suit at bar. Judge Grosscup held that *substitution* of one record for another in the patented combination, "in order to increase the repertory of tunes" and make the graphophone useful, was the same in principle as *repair* and ought to receive the same consideration. *Such substitution is not reconstruction in any sense.*

It is very clear that in the *Amet* case defendant was not selling to a purchaser of the *combination* from the patentee a temporary part or any part intended to replace a part of a combination purchased from the patentee. The mere sale of *records* by the patentee was not a sale of the *combination* but a sale for the purpose of enabling purchasers of the combination to repair or keep the combination useful when the original records were discarded because worn out or not desired. Judge Grosscup recognized that the sale of records was the same as the sale of parts to replenish a combination by a substitution of a new element

for the one worn out. He says that the keys of a piano may be replaced without releasing the combination of which the keys are an element from the monopoly of a patent. This clearly means, and under the authorities must mean, that if the patentee had sold the combination consisting of the piano and the keys, or consisting of sound reproducing mechanism and a sound-record, the purchaser would have acquired the combination released from the monopoly of the patent and would in consequence have acquired the right to replace the keys of the piano or the sound-record in order to replenish the combination when the keys required replacement, or the sound record had been rendered useless through repetition or had been broken, scratched or worn out.

What Judge Grosscup decided is very clear and admits of no question whatever. In the *Amet* case the *defendant* made and sold *the reproducing mechanism or graphophone* of the combination claimed in the patent. The sale was made not to a person who had purchased the combination of the patent from the patentee, but to a person who had purchased or who contemplated purchasing only the temporary record of the combination from the patentee. *Therefore, the purchaser had not paid to the patentee the consideration or royalty for the use of the combination of the patent and not having acquired the combination of the patent by purchase from the patentee, he had no right whatever to make or to deal with the combination of the patent in any way whatever.*

The Amet case is not the reverse of this case. Here the proposition is that defendant sells sound-records *to purchasers from complainants and their licensees of the combination* of the patent consisting of the reproducing mechanism *and the record.*

In the Amet case *there was no purchaser of the combination from the patentee* and hence the reproducing mechanism made and sold by defendant was sold to a person who had acquired no right whatever to use the combination of the patent. It is hardly necessary to point out that the reproducing mechanism is the *permanent* part, both of the graphophone of the *Amet* case and of the gramophone of this case, and it is the reproducing mechanism of this case which *contains the essence of the invention,* to wit: the universal joint. If a purchaser of the combination from complainants and their licensees were to construct or purchase from another than complainants or their licensees *the reproducing mechanism*, he would be *reconstructing* the invention and not replacing a temporary part. When, however, a purchaser of the combination from complainants and their licensees replaces the record which is essentially a *temporary* part of the combination and which is changed practically every time the machine is put to use, and which is perishable in its nature, soon becomes old, broken or worn out by use, the purchaser does the very thing which complainants intended he should do when they constructed the combination and sold the combination to him.

The contention of complainants, therefore, comes to this, that in order to continue the purchased combination in use, the purchaser must continue to purchase from complainants the unpatented and temporary part of the combination, namely, the sound-record. In other words, complainants assert that they have a monopoly in the unpatented article. It is confidently asserted that such contention is erroneous and in direct conflict with every adjudicated case. This Court expressly so held in the *Morgan Envelope Co.* case (*supra*, p. 76).

POINT SIX.

Complainants and their licensees having sold the combination of the patent to purchasers without restriction as to the records to be used to replace those purchased, it is well settled law that defendant has the right to sell records to such purchasers for use in replacing records purchased with machines from complainants and their licensees.

(See assignment of errors, No. 16, *supra*, p. 54.)

In *Heaton Co.* v. *Eureka Co.*, 77 Fed. 288, the Circuit Court of Appeals for the Sixth Circuit considered this question. It was held that the owner of a patent for a machine for fastening buttons to shoes with metallic fasteners could sell such machines, subject to a condition or restriction that they should be used only with fasteners manufactured by the seller. Judge Lurton, writing the opinion of the court, pointed out (p. 300) that the distinction between such a case and the *Morgan Envelope Company* case (152 U. S., 425), and the case of *Wilson v. Simpson* (9 How., 109), discussed *supra* under Point One, consists in the *restriction* under which the patented machines for fastening buttons were *sold*. This distinction Judge Hough overlooked. Referring to the *Morgan Envelope Company* case Judge Lurton said (p. 300):—

> "the sale of the machine involved and implied the right of use of the material with which it was to be combined; and this is shown by the case of Wilson v. Simpson, 9 How. 109, which is cited by Mr. Justice Brown as a case sustaining his conclusion. That case was a

suit for infringement against the purchaser of a patent machine for planing wood, in which there were claims for the combination between the rest of the machine and certain knives necessary to its operation. The alleged infringer had made or bought knives to replace the knives in the machine which had worn out, and which it was shown must necessarily wear out and be renewed long before the main body of the machine would wear out. *It is held that the conveyance of the machine itself, with the knives in it, implied the right on the part of the purchaser to renew or replace the knives necessary for the enjoyment and use of the whole machine during its natural life.* Thus, with respect to the paper holder, the supreme court, in effect, held that *the sale of the paper fastener with the paper in it contained the implication of a right to renew the paper* when that paper sold should be exhausted, and *did not require the purchase of the paper from the original patentee*, the paper itself not being patented. In the case at bar the purchaser expressly agreed, *by contract*, that his right to use the machine should not extend beyond its use with staple fasteners furnished by the patentee, and this makes the broad distinction between the Morgan Envelope Co. Case and the case at bar."

In *Rupp* v. *Elliott*, 131 Fed., 730 and *Tubular Co.* v. *O'Brien*, 93 Fed., 200, the *Heaton Co.* case was followed. But in *Cortelyou* v. *Johnson & Co.*, 207 U. S. 196; (s. c. 145 Fed. 933, C. C. A.) this Court left open the question whether a restriction upon the use of a patented article, made upon the sale thereof by notice affixed thereto, could be enforced in a suit upon a *patent* as distinguished from a suit upon *contract*, it not appearing that defendant had notice of the restriction. The same question was also left open by this Court in *Keeler v. Folding Bed Co.*, 157 U. S. 659, 666; *Hobbie v. Jennison*, 149 U. S. 355; *Adams v. Burke*, 17 Wall. 453;

Bement v. National Harrow Co., 186 U. S. 70; *Hartell v. Tightman*, 99 U. S., 547; and *Bobbs-Merrill Co. v. Strauss*, 210 U. S. 339.

In *Edison Elec. Light Co. v. Peninsular Co.*, 101 Fed., 831, the same court that decided the *Heaton Co.* case held, however, that the purchaser from a patentee of an electrical lighting plant is not obliged to continue to take the electrical current from the patentee. Judge Lurton, writing the opinion of the court, said (p. 837);—

> "If it was intended that so expensive an apparatus could be utilized according to the methods of the patents under which the vendor was operating only so long as the vendor should supply the current, good faith required that the vendees should be plainly so informed. It cannot be doubted but that the vendees understood they were securing a permanent wiring system, which might be used in combination with a current obtained from any source, delivered to the house wires in such manner as to utilize them to the best advantage. *It would be most unreasonable to suppose that in order to continue the use of this, the very essence of the Edison inventions, they must continue to take current from a particular source.*"

It appears from both the moving and opposing affidavits upon the contempt motion that complainants and their licensees have sold the machines and records forming the combination of the claims in suit *without any restriction whatever* as to the right of the purchaser to replace the records by records purchased from others (con. rec. aff. E. F. Leeds, pp. 36-37; L. H. Bunker, p. 62; L. Moeller, p. 67; see also moving affidavits of Middleton, p. 22, and Haddon, p. 24.)

POINT SEVEN.

Defendant's disc sound-records are unpatented articles of commerce of the prior art, which defendant could legally sell for use in the United States on mechanical feed-device machines, for export to foreign countries, concededly for repair of machines sold by complainants, and for other lawful purposes. There is no authority holding a party liable as an infringer solely because an article sold by him might be, or was, in fact, used by the purchaser as one element of a patented combination. The tendency of the later decisions is to do away with unwarrantable restrictions upon trade.

(See assignment of errors, Nos. 5, 11, 12, 17, 20, *supra*, p. 54).

It has already been shown that defendant's disc sound-records are unpatented articles of commerce of the prior art (*supra*, p. 43); that defendant's disc sound-records were originally used and have continuously been used upon mechanical feed-device machines of the prior art from the invention of the phonograph in 1877 down to the present day (*supra*, p. 46); that large quantities of defendant's disc sound-records have been sold by defendant for export and have been exported to foreign countries (*supra*, p. 54); and that defendant's disc sound-records are adapted to replace the old, broken and worn out records of the sound reproducing apparatus of the patent

in suit (*supra*, p. 28). It cannot, under any circumstances, be argued that the unpatented sound-records made and sold by defendant cannot legitimately be used at least for any one or more of the above-stated purposes.

A careful reading of the cases wherein contributory infringement has been found, will show that in each case stress had been laid upon the fact that the article made and sold by the defendant, held to be a contributory infringer, was *adapted* for use *only* in the patented combination, or upon affirmative proof of a concert of action between two infringers acting without legal right.

In *Bullock Co.* v. *Westinghouse* Co., 129 Fed. 105, 111 (C.C.A.) the judgment of the Circuit Court finding defendant in contempt of the preliminary injunction was reversed. The Circuit Court of Appeals held that if the article sold be *adapted* to other uses than use as an element of the patented combination, "*the intention to assist in infringement must be otherwise shown affirmatively*," and that;—

> "The finding that the intent and purpose in making and selling this motor was that it should be used in the patented device in Canada, is a finding against any infringing purpose. It would not be an infringement to put the motor to the use intended because that use was beyond the protection of the patent. *The defense is as complete as if the intent had been to furnish the motor to one having a license to make, sell and use.* In neither case would there be an intent to assist in an infringement, and *without such intent* the plaintiff in error was not infringing the patents or disobeying the order of the court.
>
> "What we have said applies as well to the *method patent* as to the *combination claims. There must be shown an intent to assist another in an infringing use of the patented method.* There being no intent to provide

means by which another might *unlawfully* use the Tesla method, there is no contributory infringement.

"The judgment, for these reasons, must be reversed, with directions to discharge the rule to show cause."

From the decision in the *Bullock* case, it is clear that defendant has *the legal right to sell its sound-records for export to foreign countries for use in the foreign countries upon sound reproducing machines of all kinds.* Such right, says the court, is as complete as *the right to sell to one who has a license to use.* The purchaser of the patented combination from complainants unquestionably has the right unconditionally to *use* the patented combination and to replace the record thereof in order to continue the use of the combination.

In *Cortelyou* v. *Johnson & Co.*, 145 Fed. 933 (C.C.A.), the Circuit Court of Appeals, refusing to enforce a restriction under which a patented article was sold by the patentee, held that unwarrantable restrictions upon trade should not be created or upheld, and explained the doctrine of contributory infringement as follows (pp. 934-935):

"The doctrine originated in a desire to secure to a patentee complete protection in all the rights granted him by the patent, but it was confined to those rights; it went no farther. One who sold an element of a patented combination, *which could not be used except in an infringing combination or device*, was not permitted to reap the benefits of such sale. He did not himself directly infringe, but he promoted the infringement of others by putting in their hands a device *which could only be used in violation of the patent.* When confined to articles, whether covered by the patent or not, which are made for the express purpose of inducing infringement and are not

> intended *for any legitimate use,* the doctrine of contributory infringement is logical, just and salutary."

When the *Cortelyou* case came before this Court (207 U. S. 196), the right to enforce the restriction in a patent suit was left open, since it did not appear that the defendant had notice of the restriction.

The holding in the *Cortelyou* case, that unwarrantable restrictions and intolerable burdens should not be put upon trade, is in line with Judge Wallace's opinion in *Thomson-Houston El. Co. v. Kelsey Co.,* 75 Fed. 1005 (*supra,* p. 81), and of the Supreme Court in the *Morgan Envelope Co.* case (*supra,* p. 75).

In *Snyder* v. *Bunnell,* 29 Fed. 47, 48, Judge Coxe reviewed the authorities upon the question of contributory infringement and said;—

> "In each of these cases the complainant succeeded because the article dealt in by the defendant *was only useful when combined as provided by the patent* in question, and was sold by him intending that it should be put to this unlawful use. A careful examination has failed to discover an authority holding a party liable as an infringer solely because an article sold by him *might be used by the purchaser as one element of a patent combination.* Such a doctrine would be too dangerous to be upheld."

In the case at bar the learned Circuit Judge held defendant in contempt for selling the unpatented records of the prior art which were capable of use, and had continuously been used, upon mechanical feed-device machines; and, *though conceding that the records were frequently purchased as substitutes for worn out discs,* he ignored this fact and held that such substitution was not a repair because the records were bought

more frequently in order to increase the repertory of tunes.

There was no proof whatever, as shown in a following point (p. 133), *of the purpose for which defendant's records were bought by the purchasers and sold by defendant and there was, therefore, no basis of fact upon which to hold defendant in contempt even under the interpretation of the law stated by the learned Circuit Judge in his opinion.*

The decision of Judge Coxe in the *Snyder* case is well settled law. In *Thomson-Houston Co.* v. *Ohio Co.*, 80 Fed. 712 (C.C.A.), which complainants' counsel largely quoted in the courts below, omitting those parts, however, which support defendant's contention, the Circuit Court of Appeals said (p. 723);—

> "Of course, such an inference could not be drawn had the articles, the sale or offering of which was the subject of complaint, *been adapted to other uses than in the patented combination.* In the latter case the intention to assist in infringement must be otherwise affirmatively shown, and *cannot be inferred from the mere fact that the articles are in fact used in the patented combinations or may be so used.*"

In *Standard Co.* v. *Computing Co.*, 126 Fed., 639 (C.C.A.), the same court said (p. 653);—

> "Testimony was introduced by the appellant which it claims is to the effect that it does not make any adjustment itself, but makes and sells its scales with provision for such adjustment as the purchaser sees fit to make, and we are not referred to any evidence conflicting with this. Of course, if it made or sold scales having peculiar provision for the intended incorporation therein of a valid patented device of the appellee, it would be liable as a contributory, if the expected incorporation should thereafter be made by an-

other. *But if it makes or sells scales having simply adaptations for a proper adjustment, such as was known in the art, it would not be liable if another person should of his own volition put into the scales a form of adjustment patented by the appellee.*"

Again in *Canda* v. *Michigan Co.*, 124 Fed. 486 (C.C.A.) the same court said (p. 489);—

> "The case is not like one where the thing made is also *adapted* to use in other ways. It would be wholly inadmissible to shut out the manufacture or sale of those things adapted to a proper and lawful use. That would interfere with the rights and privileges of the public."

Of course, these cases recognize the rule that where two persons knowingly co-operate to infringe a patented combination, they are guilty of contributory infringement, but it is clear from the decisions quoted that any one has a right to manufacture, sell and use an unpatented article, and *the mere fact that that article may be used or is, in fact, used in the patented combination*, is not sufficient ground upon which to hold the vendor guilty of contributory infringement. This would interfere with the rights and privileges of the public. Even in the patented combination the use may be a lawful use, since a purchaser of the patented combination may, without infringement, exercise his rights in regard thereto.

POINT EIGHT.

Complainants and their licensees, by selling the sound reproducing apparatus of claim 35 of the patent in suit, impliedly licensed the purchaser thereof to combine a suitable record therewith, in every case where the apparatus was sold without a sound-record combined therewith, and for that purpose to purchase such a record from persons other than complainants or their licensees.

This proposition is raised by assignment of error No. 22 (*supra*, p. 54), which reads as follows;—

> "22. In not holding that complainants and their licensees, by the selling of the elements, other than the record, of claim 35 of the patent in suit, impliedly licensed the purchaser thereof to combine a suitable record with such purchased elements, and for that purpose to purchase such a record from persons other than complainants or their licensees."

It is to be observed that it is not necessary for defendant to establish this proposition in order to secure a reversal of the judgment or decree finding defendant in contempt; because the finding of the Circuit Court was that defendant had violated the injunction *solely* by selling records for use on machines which complainants and their licensees had sold *combined with records*. It is clear, however, that if the above proposition be correct, and under the authorities hereafter cited it is submitted that it is correct, the judgment or decree finding defendant in contempt must be reversed.

In *Morgan Envelope Co.* v. *Albany Paper Co.*, 152 U. S., 425, 432, (considered *supra* under Point One, p. 75), this Court said;—

> "The real question in this case is, whether, *conceding the combination of the oval roll with the fixtures to be a valid combination*, the sale of *one element* of such combination, with the *intent* that it shall be used with the *other element*, is an infringement. *We are of the opinion that it is not.*"

The cases involving contributory infringement, this Court, continuing, said (p. 432);—

> "have no application to one where the element made by the alleged infringer is an article of manufacture, perishable in its nature, which it is the object of the mechanism to deliver, and *which must be renewed periodically, whenever the device is put to use.*"

If a log were an element of a patentable mechanism for sawing such log, the purchaser of the sawing-device would not, said this Court, be obliged to buy his logs from the patentee. So in the case at bar, since the sound record is a temporary element of the combination which must frequently be renewed at short intervals, whenever the sound reproducing apparatus is put into use, *the object of the apparatus being to deliver the sound from the sound record*, the purchaser of the sound reproducing apparatus from the patentee is, for the same reason, under no obligation to purchase his sound-records from the patentee.

The sound-reproducing apparatus operates upon the record, as Judge Wallace remarked (con. rec. p. 94), just as the saw operates upon the log. *In each case, when the operation of the machine is finished, the thing operated on, the record or the log, must be replaced.*

Of course, *if the sound-record itself were the sub-*

ject of a valid patent, it would to use the words of this Court,

> "be an infringement of that patent to purchase such product of another than the patentee; *but if the product* (here the sound-record) *be unpatentable, it is giving to the patentee of the machine the benefit of a patent upon the product, by requiring such product to be bought of him.*"

Judge Wallace, when deciding the Morgan Envelope Co. case in the Circuit Court, also said, as shown *supra* at p. 71;—

> "The sale of the paper to those who have a lawful *right to use the fixture*, and to use both the fixture and paper together, is not an invasion of the rights of the complainant."

This interpretation of the decision of the Supreme Court in the *Morgan Envelope Company* case is one which has been given by the courts.

In *Heaton Co.* v. *Eureka Co.*, 77 Fed., 288, 300 (C.C.A.) the court, referring to the Morgan Envelope Company case, said;—

> "The sale of the machine involved and *implied the right of use of the material with which it was to be combined*; and this is shown by the case of *Wilson* v. *Simpson*, 9 How. 109, which is cited by Mr. Justice Brown as a case sustaining his conclusion. * * * It is held that the conveyance of the machine itself, with the knives in it, *implied the right on the part of the purchaser to renew or replace the knives necessary for the enjoyment and use of the whole machine during its natural life.*"

In *Edison El. Co.* v. *Peninsular Co.*, 101 Fed. 831, 836, (C.C.A.), the same court said;—

> "To restrict the right of a purchaser of an apparatus embodying a patented invention to

use it for the purposes for which it is peculiarly adapted, there must appear some express or implied *agreement* by which the mode or time or place of use has been limited; and this was the principle upon which the Button-Fastener Case, cited above was decided. But there may be circumstances under which the sale by a patentee of one patented article will carry with it the right to use another in co-operation with the first, although the thing be covered by a second patent. *Thus, if the article sold be of such peculiar construction as that it is of no practical use unless it be used in combination with some subordinate part covered by another patent of the vendor, the right to use the latter in co-operation with the former might be implied from circumstances.* It is a general principal of law that a grant necessarily carries with it that without which the thing granted cannot be enjoyed."

In *Thomson-Houston Co.* v. *Illinois Co.*, 152 Fed. 631, C.C.A. (S. C. 143 Fed., 534, 539, C.C.), it was held, following *Edison El. Co.* v. *Peninsular Co.*, *supra*, as stated in head note 1;—

"The sale of electric engines, which could only be used by the purchaser in connection with a trolley switch or device *covered by a patent owned by the seller*, without any restriction in the contract, carried with it an *implied license* to use such device, not only with the engines so sold, but as well with others bought from other makers, and the seller cannot claim such use to be an infringement; nor is it material that it usually restricted the right to use in connection with its own engines or cars, where no notice of such custom was given to the purchaser."

In *Roosevelt* v. *Western El. Co.*, 20 Fed. 724, Judge Wallace said;—

"Where the article is of such peculiar characteristics that it cannot be dealt in as a trade

> commodity, and cannot be used practically at all, unless *as a part of another patented article of the vendors, it would be preposterous to suppose that the parties did not contemplate its use in that way.* It would be against good conscience to allow an injunction to a vendor under such circumstances. *He would be estopped from asserting a right which the purchaser must have understood him to waive.*"

How much stronger is the case with the *unpatented* sound record.

Of course, the rule *here* contended for, under the *Morgan Envelope Company* case, applies only to the rights of the purchaser to combine with the parts of the combination purchased from the patentee, *an unpatented temporary element of the combination necessary for the use and enjoyment of the parts purchased.* It would not apply in a case where the purchaser had purchased from the patentee only the unpatented, temporary element of the combination. The implication arising from the purchase of the *temporary* element would clearly be, as in the *Amet* and *Leeds* cases considered *supra* pp. 105, 108, that the temporary element was to be used as a substitute for the same element in the patented combination in order to restore or otherwise continue the combination in use. From the purchase of a *temporary* element, no implied right could be derived to construct the *permanent* elements constituting the durable parts of the combination. When, however, *a durable machine*, constituting the permanent part of a patented combination, is sold by the patentee, *the purchaser necessarily acquires the right of combining with the purchased durable machine any element, such as a temporary element, which must frequently be renewed, necessary for the use and enjoyment of the machine.*

POINT NINE.

The finding of the Circuit Court places an intolerable burden upon defendant's conceded right to make and sell the unpatented sound-records of the prior art.

(See assignment of errors, Nos. 11, 17, *supra*, p. 54).

Upon this point the attention of the Court is respectfully called to the forcible opinion of Judge Wallace in *Thomson-Houston Co. v. Kelsey Co.*, 75 Fed. 1005; also to the opinion of this Court in *Cortelyou v. Johnson*, 207 U. S. 196, and other cases cited *supra*, pp. 112-113.

The learned Circuit Judge, in his opinion (con. rec. p. 74), says;—

> "No effort to restrict the use to which defendant's discs should be put by notice on their face or otherwise was made until after motion, and the affidavits are not as satisfying as they might be that such notice has since been affixed; and such notice might fairly go further and advise the purchasers that to use it on one of complainant's machines would make the user an infringer."

Since the Circuit Court found defendant in contempt for a violation of the preliminary injunction, defendant has sold its sound-records subject to the following restriction set forth upon a label affixed to each record;—

> "This record is sold for use on all mechanical feed-device machines and upon all licensed Victor, Columbia and Zonophone machines and all other machines licensed under U. S. patent No. 534,543 in replacement of any worn out or broken record thereof. Any other use of this record will be a violation of the condi-

tions under which it is sold and an infringement."

The order partially staying the preliminary injunction, pending the review by this Court, permits defendant to sell "disc sound-records for use in the United States *upon machines sold by complainants and their licensees, together with disc sound-records*" (con. rec. p. 77).

Clearly defendant's right to sell its disc sound-records subject to the restrictions set forth on the label above quoted is beyond question; and the defendant's right is broader than the restriction set forth on the label. The right granted by the stay is also broader than the restriction set forth on the label; and defendant's right is broader than the right granted by the stay.

But *why*, it may be asked, should the learned Circuit Judge have held that defendant, in selling the *unpatented* sound-record of the prior art, was under *any* obligation to sell its sound-records subject to a *restriction* set forth upon a label affixed thereto? How *is* it that complainants, through the invention of an improved machine for use in reproducing sound from the records of the *prior* art, has acquired the right to compel all makers and sellers of records to affix labels to the records sold, restricting the right of use of the records?

While it may be that a patentee may sell his patented article subject to a valid restriction as to the use thereof, and that a *purchaser*, who by contract with the patentee, agrees to observe the restriction and acquires the right to the patented article subject to the restriction, must use the purchased patented article only in accordance with the restriction under which he purchased it; it is an entirely different matter, constituting an intolerable burden on legitimate business, to hold that *one not in privity with the pat-*

entee, the maker and seller of *an unpatented article of the prior art*, adapted for a legitimate use, for many legitimate uses, or for any legitimate use other than a use in the patented combination, though even that use may be lawful, shall be obliged to deal in the article *at his peril*, merely because a patent has been issued for an *improved* apparatus *designed for use in connection with the unpatented article of the prior art*. Everybody has a right to make, to use and to sell a disc sound-record. Everybody has a right to purchase such a disc sound-record. Everybody has a right to *construct* or *to purchase a feed-device machine* or any machine other than the machine of the patent in suit, for use in connection with the disc sound-record. Why, then, is defendant not at liberty freely to sell its disc sound-records on the open market, without restriction and without inquiry as to the intended use thereof?

The remarks of this Court in *Cortelyou* v. *Johnson & Co.*, 207 U. S., 196 (S. C. 145 Fed. 933), clearly indicate that the intolerable burdens and unwarrantable restrictions which are fettering commerce in unpatented articles will no longer be sanctioned or enforced by the courts. *Privity with a wrong-doer is not to be inferred from the exercise of a legal right.* The manufacture and sale of many articles is legal and does not become illegal because certain *uses* thereof are prohibited by law. To hold the seller of a knife guilty, because the purchaser commits an unlawful and prohibited act therewith, would be an absurdity (cf. 75 Fed., 1011, per Wallace, C. J.). For the same reason there is no legal principle which prohibits defendant from making the unpatented sound-record of the prior art and selling it on the open market without restriction and without inquiry as to the use which the purchaser intends to make of the purchased record.

In *Welsbach Light Co. v. Union Incandescent Light Co.*, 101 Fed. 131 (C. C. A.), the court affirmed the principle here contended for. That case involved a patent for a *process*. Infringers of the process sold the *product* to the defendant and the learned Circuit Judge (Judge Lacombe) enjoined the defendant (see record on appeal, p. 71),

> (a) from the sale or use of the purchased product, except such as shall be *shown* to have been made by others *before* the entry of the order; and
>
> (b) from the sale or use of the product of the process, except as stated under (a), unless *shown* to have been made in a foreign country.

Judges Wallace and Shipman, in a *per curiam* opinion, held this to be error and said;

> "That part of the order appealed from restraining the defendant, during the pendency of the action, from selling any incandescent mantels, 'except such as shall be *shown* to have been coated by others,' can only be justified upon the theory that the patent for infringing which the suit was brought was a patent for a product or manufacture, and not one for a process. If it was a patent for a process, it would not be infringed by selling the product, and *no conditions should have been annexed to the exercise of the vendor's rights.* The broad proposition that the vendor of a product which has been made *in infringement* of a patented process is *an infringer, or liable to any extent to the patentee, is untenable* and does not require discussion. The patentee's remedy is against the manufacturer. *Merrill v. Yeomans*, 94 U. S. 568."

POINT TEN.

The question raised in the Circuit Court upon the motion to punish defendant for contempt was an entirely new question. The act for which defendant was held to be in contempt was not included in the preliminary injunction or the decree therefor. Under such circumstances the motion should have been denied and complainants left to raise the question by appropriate proceedings other than a motion to punish for contempt.

(See assignment of errors, Nos. 2, 9, 10, 27, 28, 29, *supra*, p. 54).

The questions raised in the prior suit and upon the motion for injunction in this suit have been fully stated (*supra*, p. 10). The injunction has also been set forth (*supra*, p. 9). Defendant was enjoined from *manufacturing*, *selling* and *using*, or in any way *disposing* of the *apparatus* or *devices* specified in claims 5 and 35 of the patent in suit, and from *using* or *employing* in any way the *method* specified in claim 5. This clearly meant that defendant was enjoined from making, selling and using the *combination* specified in claim 35. There was no provision enjoining defendant *broadly* from infringing claims 5 and 35. The decree was *specific*, enjoining the making, selling and using of the combination held to be an infringement. *Defendant was not enjoined from selling sound records; nor was defendant enjoined from selling sound-records with the intent that the same should be used "in machines (other than 'mechanical feed'*

machines) sold by complainants or their licensees combined with such records, for use in carrying out the method of claim 5." In the prior suit and in this suit, on the motion for injunction, the proof of sole infringement was that the defendant had sold and used a machine, combined with a record, neither of which had been made or sold by complainants, or their licensees. Such was the infringement charged and found by the courts and such was the infringing act enjoined. Neither in the prior suit, nor on the motion for injunction in this suit, was it charged or found that defendant infringed by selling sound records for use in machines sold by complainants or their licensees combined with records, *nor was any evidence whatever introduced to show that the sound-record was or was not a temporary element of the combination of the patent in suit, or to show that the sound-reproducing apparatus of the patent in suit was or was not constructed or sold with the intention that the record should frequently be replaced*, or to show any of the other matters material for the determination of the question raised for the first time upon the motion to punish for contempt. As will be seen from the following cases, a motion for attachment for contempt is not adapted to the trial of a new question, and the law is well settled, that all such motions, depending upon the trial of a new question, should be denied.

In *Enterprise Co. v. Sargent*, 48 Fed., 453, 454, Judge Shipman said;—

> "Notwithstanding the character of the plaintiff's suggestions, it is true that this is a motion for contempt for violation of an injunction order, and that the former opinions of the court were not directed to the structure as now modified, and that, to a certain extent, a new question has arisen which requires the court to re-examine the self imposed limita-

tions of the patent. *A motion for attachment for contempt is not adapted to the trial of a question of this kind.* I am therefore of opinion that the motion should be denied, but without prejudice to the plaintiff's right to file a supplemental bill in the original suit, which is still pending, or to file an original bill, as it may be advised. *Allis* v. *Stowell*, 15 Fed. Rep. 242; 3 Rob. Pat. 649."

The courts have upheld the principle above stated in such a variety of cases that a citation of a few only of them is all that is necessary;—*Bate* v. *Eastman*, 11 Fed., 902, (Blatchford, C. J.); *Allis* v. *Stowell*, 15 Fed., 242, 244, (Dyer, J.); *Temple Pump Co.* v. *Goss Co.*, 31 Fed., 292, (Blodgett, J.); *Truax* v. *Detweiller*, 46 Fed., 117, (Lacombe, C. J.); *Bonsack Mach. Co.* v. *National Co.*, 64 Fed., 858, (Lacombe, C. J.); *United States Co.* v. *Spalding*, 93 Fed., 822, (Wheeler, D. J.).

It should be observed, moreover, that in cases where contributory infringement has been found, the decrees of the courts have invariably been so framed as to show explicitly what the defendant was enjoined from doing and was permitted to do. An example of this is *Thomson-Houston Co. v. Kelsey Co.*, 75 Fed. 1005 (C.C.A.), cited and quoted *supra* under Point Two (p. 80), where Judge Townsend, having found contributory infringement of the combination claims of the patent, specifically enjoined the making or selling of the articles which contributed to the infringement of the combination claims of the patent, to wit, "*trolley bases devised or intended to be used in infringement*" (p. 1007). Thus the defendants were informed of the fact that they were enjoined and of what they were enjoined from doing and accordingly appealed to the Circuit Court of Appeals, with definite and specific assignments of error. *The Circuit Court of Appeals held the in-*

junction to be too broad and specifically modified the order so as to state explicitly that defendants were not enjoined *"against the sale of trolley stands by way of replacement of broken stands, or stands worn by use, or substitution for trolley stands previously sold by complainant to purchasers from it"* (p. 1010).

In the case at bar, defendant appealed from the decree for injunction herein, and that decree is now before this Court for review in Case No. 80, but obviously defendant did not, and could not on the said appeal, by any possibility whatever, make an assignment of error to the effect that the Circuit Court had erred in enjoining defendant from selling sound records for use on *machines sold by complainants or their licensees combined with records.* No such provision was contained in the decree.

It requires no citation of authority to show that an injunction must be clear and explicit. The defendant should know what it is he is enjoined from doing. "To sustain proceedings for contempt the order should be clear and certain in its terms" (Brown J., in *In re Cary*, 10 Fed. 622, 626 and cases cited). In the case at bar the act for which defendant has been held to be in contempt was a perfectly legal act and in no sense an infringement of the patent and was not, moreover, an act included, either expressly or by implication, in the injunction or decree therefor. For the reasons stated, and for each of them, the learned Circuit Judge erred in holding defendant in contempt.

POINT ELEVEN.

Complainants presented no proof whatever that the sound-records sold by defendant were in a single instance used or intended to be used in any infringement of the claims in suit; no proof whatever that the sound-records sold by defendant were used for the reproduction of sound on any machine of any construction. The mere making and selling of an unpatented article is not an infringement of a claim for a combination of which that article is an element.

(See assignment of errors, Nos. 4, 5, 6, 11, 12, 14, 17, 19, 27, 28, 29, *supra*, p. 54).

There being no substantial evidence to sustain the judgment for contempt, this Court can look into the evidence to ascertain that fact (*Cortelyou v. Johnson*, 207 U. S., 196; *Turnbull v. Ross*, 141 Fed. 649; *Swenson v. Cunningham*, 157 Fed. 753, 754).

The moving papers are entirely silent upon the question of any use whatever of the sound records purchased from defendant. In fact it would appear that they have never been used, since they were merely purchased and offered in evidence. They *could*, concededly, have been used in several ways without infringement. *Hence it was error to find that defendant had violated the injunction without affirmative proof that the purchasers of defendant's records intended to use them in infringement of the patent and that defendant at least had*

knowledge of such intention (*Shickle Co. v. St. Louis Co.*, 77 Fed. 739, 743). *Concededly, for example, if the purchasers intended to use the records to replace, in the combination purchased from complainants, records that were broken or worn out by use, there was no infringement. The evidence did not show that the purchasers did not intend to make such use of the records.*

In *Standard Co.* v. *Computing Co.*, 126 Fed., 639 (C. C. A.), the court said (p. 653):

> "Of course, if it made or sold scales having peculiar provision for the intended incorporation therein of a valid patented device of the appellee, it would be liable as a contributory, *if the expected incorporation should thereafter be made by another.* But if it makes or sells scales having simply adaptations for a proper adjustment, such as was known in the art, it would not be liable if another person should of his own volition put into the scales a form of adjustment patented by the appellee."

Referring to the moving affidavits, it appears from the affidavit of Luck (p. 10) that defendant continued to sell sound-records; of Hemenover (p. 12) that defendant continued to sell sound-records; of Platz (p. 13), a dealer in complainants' machines and records exclusively, that defendant continued to sell sound-records; of Bennett (p. 16) that defendant continued to sell sound-records and that *Bennett possessed one of complainants' machines;* and of Thompson (p. 18) that defendant continued to sell sound-records and that Thompson inquired whether defendant's records could be used "*on a talking machine of the manufacture of the Victor Talking Machine Company.*"

Waiving for the present the facts that both Bennett and Thompson were informed as to defendant's mechanical feed-device machine (aff.

Bunker, p. 60), and that Bennett and Thompson have not correctly or fully stated the conversations which they had with Mr. Bunker who was not an employe of defendant (aff. Bunker, p. 60; p. 62), and that Mr. Bunker did not possess a Victor machine (p. 60), it appears from the two affidavits of Bennett (pp. 16, 19) and the affidavit of Thompson (p. 18) that *neither of them indicated to Mr. Bunker what sort of machine they had in mind when they asked whether defendant's sound-record could be used "on a talking machine of the manufacture of the Victor Talking Machine Company"* (p. 18; p. 19), and were informed by Mr. Bunker, not an employe of defendant, "that defendant's records could be played upon such mechanical feed device machine and other suitable machines" (p. 60; p. 61).

Moreover, there is *no suggestion* in the affidavits or proofs throughout the record, that defendant's records were *sold or purchased for the purpose of increasing the repertory of tunes* of the purchaser *rather than as substitutes for worn out discs; nor does the judgment or decree holding defendant in contempt make any such finding.* The judgment is that defendant violated the injunction in that it sold records for use "in machines (other than 'mechanical feed' machines) sold by complainants or their licensees *combined with such records*" (p. 75). Upon such evidence and such finding the learned Circuit Judge found defendant in contempt.

This was clear error.

POINT TWELVE.

The record in the contempt proceedings includes the record in the injunction proceedings. The patent in suit having expired before the suit was begun, the Circuit Court was without jurisdiction to entertain the suit. The claims in suit, moreover, are void. Hence the judgment finding defendant in contempt (a) was void, because beyond the jurisdiction of the Court, and (b) should be set aside, because, the claims being void, the injunction was improperly granted.

Under Point Fourteen (p. 249) of petitioner's brief on the injunction branch of this suit, No. 80, *Root* v. *Railway Co.*, 105 U. S. 189 and other cases are cited showing that the Circuit Court had no jurisdiction to entertain this suit in Equity since the patent had expired before the suit was begun. In the other points of said brief, it is shown that claims 5 and 35 of the patent in suit are void for the reasons there stated. Hence the judgment finding defendant in contempt was void because beyond the jurisdiction of the court and the claims in suit being void, the judgment finding defendant in contempt should be set aside. One-half of the fine imposed is by the judgment to be paid to complainants and the other half is to be paid to the United States (con. rec., p. 75). Defendant is, therefore, entitled to a review of the judgment by writ of error (*Matter of Christensen Engineering Co.*, 194 U. S. 458; *Bullock Co.* v. *Westinghouse Co.*, 129 Fed. 105).

Upon the point that the judgment for contempt should be set aside upon reversal of the decree for injunction, the following cases, though decided before the act of March 3, 1891 establishing the Circuit Courts of Appeals, may be referred to (*ex parte Fisk*, 113 U. S., 713; *Worden* v. *Searles*, 121 U. S., 14; *In re Sawyer*, 124 U. S., 200; *In re Ayers*, 123 U. S., 443). Under the act of March 3, 1891, this Court has jurisdiction by the granted writ of *certiorari*, to review the entire proceeding.

CONCLUSION.

The order affirming the judgment or decree finding defendant in contempt should be reversed with costs and the cause remanded to the Circuit Court, with directions to discharge the rule to show cause.

Respectfully submitted,

LOUIS HICKS,
Counsel for petitioner.

No. [illegible]

[illegible]

IN THE

United States Supreme Court.

LEEDS & CATLIN COMPANY,

Petitioner-Defendant,

v.

VICTOR TALKING MACHINE COMPANY and UNITED STATES GRAMOPHONE COMPANY,

Respondents-Complainants.

Brief on Behalf of Respondents-Complainants.

CONTEMPT PROCEEDINGS.

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FOREWORD.

Since this brief was prepared and about to be filed, complainant's counsel has received a copy of the Petitioner-Defendant's brief, forwarded him by the Clerk of the Court, and it is noted that the order of the presentation of the Points of Argument observed and followed in its petition for *certiorari*, which was followed by complainants in the preparation of this brief, has not been followed in the same numerical order in the brief now filed by defendant, though the points raised are substantially the same, consequently some correction in red ink of the Points has become necessary.

Re Defendant's Point One:

This point is considered in complainant's brief under Point One, Pages 81 to 114.

Re Defendant's Point Two:

This point is considered in complainant's brief at Pages 114 to 120.

Re Defendant's Point Three:

This point is considered in complainant's brief in the Appendix following Page 162.

Re Defendant's Point Four:

This point is considered in complainant's brief under Point Two, Pages 114 to 120, and on Pages 148 to 162.

Re Defendant's Point Five:

This point is considered in complainant's brief at Pages 120 to 128.

Re Defendant's Point Six:

This point is considered in complainant's brief at Page 128.

Re Defendant's Point Seven:

This point is considered in complainant's brief at Pages 129 to 130.

Re Defendant's Point Eight:

This point is considered in complainant's brief at Pages 130 to 143.

Re Defendant's Point Nine:

This point is considered in complainant's brief at Pages 143 to 145.

Re Defendant's Point Ten:

This point is considered in complainant's brief at Pages 146 to 162.

Re Defendant's Point Eleven:

This point is considered in complainant's brief under "Re Intent to Infringe", Pages 99 to 114, and Pages 13 to 17.

IN THE

Supreme Court of the United States.

October Term, 1908. No. 81.

LEEDS & CATLIN COMPANY,
Petitioner-Defendant.

v.

VICTOR TALKING MACHINE COMPANY AND UNITED STATES GRAMOPHONE COMPANY,
Respondents-Complainants.

BRIEF ON BEHALF OF RESPONDENTS-COMPLAINANTS.

CONTEMPT PROCEEDINGS.

STATEMENT OF THE CASE.

This case comes before this Honorable Court upon writ of *certiorari* (Contempt Rec., p. 97), granted May 28, 1907, upon petition of the petitioner-defendant, filed May 13, 1907, the said writ of *certiorari* being directed to the United States Circuit Court of Appeals, for the Second Circuit, which court by decree filed May 8, 1907 (Contempt Rec., p. 96, fol. 149), affirmed the decree of the United States Circuit Court, for the Southern District of New York, of January 11, 1907 (Contempt Rec., p. 75), holding the defendant in con-

tempt, and imposing a fine of $1000.00, one-half to be paid to the United States, and one-half to the complainants. The contempt for which the defendant was held consisted in the disobedience of a writ of preliminary injunction (Contempt Rec., p. 9), issued in accordance with the prayer of the bill of complaint, in a suit to restrain infringement of Letters Patent, No. 534,543, as to claims 5 and 35, issued to Emile Berliner, February 19, 1895, for Improvements in Gramophone. This preliminary injunction, as will be pointed out later, was issued by the United States Circuit Court, for the Southern District of New York, after affirmance by the United States Circuit Court of Appeals, for the Second Circuit.

The record and proceedings in the Circuit Court of Appeals, for the Second Circuit, and the Circuit Court, in the injunction proceedings in this suit against this defendant to restrain infringement of the said Letters Patent, 534,543, has also been brought to this Honorable Court by writ of *certiorari,* and is now pending, being No. 80, October Term, 1908. As it will be necessary in this brief to refer to the record and proceedings in said Injunction Case, and as the record therein by stipulation (Contempt Rec., p. 99), has been made a part of this Contempt Record, reference will be made to the said transcript of record in the injunction proceedings by referring thereto as the "Injunction Record," while the transcript of record in this Contempt Case has been and will be referred to as the "Contempt Record."

Before proceeding further with the statement of the case, it will be here noted that there were two similar suits, in equity, brought at about the same time for infringement of said patent, one against the Leeds and Catlin Company, the petitioner-defendant herein, and the other against the Talk-O-Phone Company, a

corporation organized and existing under the laws of the State of Ohio, and having an office in New York City, N. Y., both of which suits were prosecuted together, substantially the same testimony being in each case, each of the defendants being represented by the same counsel, and both cases heard together on the motion for preliminary injunction, in the United States Circuit Court, for the Southern District of New York, and on appeal in the United States Circuit Court, for the Second Circuit. As shown by the Injunction Record, each of the said defendants, the Leeds and Catlin Company and the Talk-O-Phone Company, sold talking machines and sound records similar to the complainants' patented talking machines and sound records, and for the purposes of the motions for preliminary injunction this fact was not denied by the defendant's counsel in each case.

The Talk-O-Phone Company, the defendant in the other, or sister suit, was principally a manufacturer of talking machines, and the Leeds & Catlin Company, the petitioner-defendant, was principally a manufacturer of sound records to be used in connection with said machines, though as above stated, this petitioner-defendant sold said machines as well. While the affidavit of E. F. Leeds (Inj. Rec., p. 312) denies that any business connection existed between the Leeds & Catlin Company and the Talk-O-Phone Company at the date of his affidavit, April 13, 1906, yet it is apparent from his affidavit that a short time prior to the suit brought, the Leeds & Catlin Company sold records to the Talk-O-Phone Company for its reproducing apparatus or machines, and also that the Leeds & Catlin Company purchased some Talk-O-Phone reproducers or machines from it. Mr. Leeds also admits (Inj. Rec., p. 313, fol. 938) that he was elected

president of the Talk-O-Phone Company, but shortly after, resigned. The affidavits of Alfred L. Irish (Inj. Rec., pp. 309-311, and pp. 283-289) while denying any then present connection between the Talk-O-Phone Company and the Leeds & Catlin Company at the date of the affidavit, shows that there were business relations between the two companies relative to the manufacture and sale of the infringing machines and records, respectively. It will also be noted that all these affidavits in the Injunction Record against Leeds & Catlin Company are entitled as well in both cases.

These facts were set forth in the affidavit of R. L. Thomae, on behalf of the complainants in the Talk-O-Phone case, but as that case was not brought here by *certiorari,* Mr. Thomae's affidavit is not before this Court in the injunction proceedings.

These explanations are necessary in order that this Honorable Court may understand why the affidavits in the injunction record are entitled in both cases, and why the Talk-O-Phone Company is so conspicuously and frequently referred to in the said affidavits. The Talk-O-Phone Company, however, did not file any petition for *certiorari* to this Court, notwithstanding the injunction decree against the Leeds & Catlin Company was entered against it at the same time as against the Leeds & Catlin Company, the Talk-O-Phone Company being apparently satisfied that the decree of the Circuit Court of Appeals could not be reversed in said injunction proceedings.

Further, since the writ of *certiorari* has been granted in the injunction proceedings and in this contempt proceedings, a final decree by consent was entered by the U. S. Circuit Court, for the Southern District of New York, against the said Talk-O-Phone Company, May 4, 1908, and writ of perpetual injunction issued upon the said consent decree on May 6, 1908.

The Leeds & Catlin Company, however, continued to prosecute their appeal in the injunction proceedings, having the affidavits entitled in both cases incorporated in the transcript of record in said injunction proceedings.

The petitioner defendant-appellant will be hereinafter referred to as the defendant and the complainants-respondents will be hereinafter referred to as the complainants.

As complainants' counsel has had no opportunity to examine defendant's brief to be filed in this Honorable Court, and has not seen the same, it being necessary to prepare this brief before any opportunity to see the same can be had, no reference herein can be made by pages to defendant's brief in this Honorable Court. As it is assumed, however, that substantially the points of defense raised by the defendant in its petition for *certiorari* will be followed, and also substantially the same points of defense as presented in the court below, we will herein refer, from time to time, to the defendant's points, defenses and statements as contained in the said petition for *certiorari*, and as contained in defendant's brief in the court below, a copy of which is attached to defendant's petition for *certiorari*, it being understood that this Honorable Court, in consideration of these matters, will have before it, not only defendant's brief on appeal prepared specially for this Court, but also the said petition for *certiorari* with defendant's brief in the court below attached thereto.

Therefore, in the following brief, it is proposed to take up first, the Points in defendant's brief in the court below (a copy of which is attached to the petition for *certiorari*) point by point, as made by the defendant, Point One, beginning on page 81; then, after discussing each of the ten Points discussed in

defendant's said brief, the points as set forth in the petition for the writ of *certiorari* will then be discussed, and with particular reference to the opinion of the United States Circuit Court of Appeals, affirming the opinion of Judge Lacombe, holding the defendant in contempt, and the dissenting opinion of Judge Wallace.

An index of subjects treated in this brief has been carefully prepared so that this Honorable Court may readily find any particular subject treated, especially in view of the somewhat extended length of the brief rendered necessary in order to meet the numerous subjects and alleged defenses which the defendant has heretofore presented in the courts below, and others which it is assumed the defendant may treat of in its brief and attempt to have this Court consider, many of which, as hereinafter pointed out, should not be properly before this Court for the reasons hereinafter pointed out. It has been deemed, however, expedient, so that the complainants' position may be fully presented before this Court on all points, to treat herein all possible points which the defendant might attempt to raise in its untiring effort to try to defeat the claims of the patent in suit, in order to allow it, and others, who are watching the outcome of this decision, to continue the manufacture and sale of complainants' patented talking machines and records.

BRIEF HISTORY OF PRESENT LITIGATION.

The defendant was sued in equity for infringement of Letters Patent, No. 534,543, issued February 19, 1895, to Emile Berliner, for the Gramophone, the charge being infringement of claims 5 and 35.

Motion for preliminary injunction was made, and granted by Judge Townsend (146 Fed. Rep. 534; Inj.

Rec., p. 318). The patent, as to claims 5 and 35, had been previously sustained, in an opinion by Judge Hazel, in the suit of these complainants against the American Graphophone Company, (140 Fed. Rep., 860; Inj. Rec., p. 63), enjoining the manufacture and sale, and use of identically the same records and reproducing apparatus as the defendant's in the present suit. The decision of the Circuit Court, by Judge Hazel, was, on appeal, affirmed in the Graphophone case, in a *per Curiam,* (145 Fed. Rep. 350; Inj. Rec., p. 73), the Court of Appeals, however, disposing of the question of alleged prior public use, on somewhat different grounds from that adopted by Judge Hazel.

Upon appeal in the present cause against the Leeds & Catlin Company from the decree of Judge Townsend, granting the preliminary injunction, the U. S. Court of Appeals for the Second Circuit affirmed the decree of Judge Townsend granting the preliminary injunction from the bench at the conclusion of the argument, in an oral opinion by Judge Wallace, not reported, but printed on pages 41 to 46 of Defendant's Petition for *certiorari.* The order, affirming the Court below, is noted in 148 Fed. Rep., 1022.

The following is a copy of the writ of Preliminary injunction, entered in accordance with the decree of October 27, 1906, which was duly served on the defendant October 29, 1906, (Contempt Rec., p. 9), which reads:

"THE PRESIDENT OF THE UNITED STATES

To Leeds & Catlin Company, Its Directors, Associates, Officers, Attorneys, Solicitors, Clerks, Servants, Agents, Workmen and Employees, Greeting:

Whereas, it has been represented to us in our Circuit Court of the United States for the Second Circuit and Southern District of New York, that Letters Patent of the United States were issued upon certain improvements and inventions or dis-

coveries of Emile Berliner, in due form of law, on the 19th day of February, 1895, No. 534,543, for gramophone, and that said Letters Patent were duly assigned to the United States Gramophone Company, and that the Victor Talking Machine Company was duly licensed under said Letters Patent, and that you, the said Leeds & Catlin Company, have infringed the fifth and thirty-fifth claims thereof:

Now, Therefore, we strictly command and enjoin you, the said Leeds & Catlin Company, and your associates, servants, clerks, agents and workmen, and each and every one of you, from manufacturing, using or selling, until further order of this Court, sound reproducing apparatus or devices embodying the subject matter of claim 35 of the Letters Patent in suit, which claim reads as follows, namely:

> '35. In a sound reproducing apparatus consisting of a traveling tablet having a sound record formed thereon and a reproducing stylus shaped for engagement with said record and free to be vibrated and propelled by the same, substantially as described.'

And from manufacturing, using or selling, or in any way disposing of apparatus or devices which embody the method specified in Claim 5 of Letters Patent in suit, which claim reads as follows, namely:

> '5. The method of reproducing sounds from a record of the same which consists in vibrating a stylus and propelling the same along the record by and in accordance with the said record, substantially as described.'

And from using or employing in any way the method specified in said Claim 5."

Counsel for defendant, in his brief, accompanying the petition for writ of *certiorari* (p. 3), intimates that Judge Townsend, in entering the original decree for preliminary injunction, struck out from a submitted

draft certain language which might have made the decree broader. He states that Judge Townsend struck from the proposed form of complainants the words "or which is intended to be operated in accordance with said method of claim 5." The fact is that the defendant submitted a form of decree to Judge Townsend, as also did the complainants, but Judge Townsend adopted neither of these forms in its entirety, employing some of one and some of the other, but made the decree very much fuller, and more comprehensive, than the form submitted by the defendant. It is respectfully submitted that the decree entered by Judge Townsend (contained on page 328 of the Injunction Record) is very broad and far reaching, and unquestionably embodies the entire device. Among other things, the defendant is enjoined from "in any way disposing of apparatus or devices which embody the method specified in claim 5 * * * and from using or employing in any way said method specified in claim 5." It also enjoins the defendant from making, selling or using "*sound reproducing apparatus* or devices embodying the subject-matter of claim 35 of the Letters Patent in Suit." Claim 35 quoted in the decree defines the "reproducing appartus" as comprising the record and the reproducing stylus.

Pending the appeal from the decision of Judge Townsend granting the preliminary injunction, the writ was stayed upon application of the defendant, upon the condition that defendant enter security in the sum of Ten Thousa Dollars, to indemnify the complainants for damages and profits due for infringement accruing during the period of the stay, which security was entered.

THE ORGINAL INFRINGEMENT.

The infringement of the defendant complained of was the manufacture and sale of disc talking machine records, for use in combination with the reproducing apparatus, as specified in claim 35 of the patent, and for reproducing sound by the method specified in claim 5; also the manufacture, sale and use of the reproducing apparatus for use in combination with the disc talking machine record or traveling tablet in the combination specfied in claim 35, for reproducing sound according to the method specified in claim 5.

The defendant's infringing records were produced as exhibits, as was also the reproducing apparatus.

Notwithstanding the said injunction, which was served October 29, 1906, the said defendant company, its officers, directors, associates, agents, employes, etc., continued, and have since continued, without license from the complainants, to make and sell the said infringing disc sound records, identically the same as those which it had been making and selling previous to the said injunction, for use in combination with reproducing apparatus in the combination specified in claim 35, and for reproducing sound in accordance with the method of claim 5, and with the full knowledge that the same were to be so used.

In other words, the defendant company, and its officers, agents, etc., continued its business in manufacturing and selling sound records of the same identical kind, for the same identical purposes, after the injunction order served October 29, 1906, in the same manner as it had made and sold the same prior to the injunction order, in utter disregard and violation of the said injunction order of this Court.

Notwithstanding the injunction the defendant continued right along in the business of manufacturing

and selling records. It never was a manufacturer of talking machines, but sold a few. (See p. 18 of this Brief.)

Upon petition and affidavits of complainants, on November 19, 1906, an order was entered by the Hon. E. Henry Lacombe against the said defendant requiring it to show cause why an attachment should not issue against it for contempt for violating and disobeying said preliminary injunction of October 27, 1906. (Contempt Rec., p. 4).

The defendant filed an answer, (Contempt Rec., pp. 28 and 29) and numerous affidavits and exhibits in defence, and on the thirtieth day of November, 1906, the case was fully heard by the Hon. E. Henry Lacombe, Horace Pettit appearing on behalf of complainants, and Louis Hicks on behalf of defendant.

On January 5, 1907, an opinion was filed by Judge Lacombe, (Contempt Rec., p. 74, etc.) holding the defendant in contempt, and imposing a fine of one thousand dollars, one-half to be paid to the United States, and one-half to the complainants, collection to be suspended, pending appeal. A decree in conformity with the decision was duly entered on the 11th of January, 1907 (Contempt Rec., p. 75), and on the same day, an order, partially staying the preliminary injunction, pending appeal, requiring monthly statements and a bond of Ten thousand dollars (Contempt Rec., p. 77), and also an order staying the collection of the fine, pending appeal, were duly entered. (Contempt Rec., p. 76). An appeal was thereupon taken by the defendant, from the said decree to the Court of Appeals, and that Court having affirmed the Court below, it is now before this Honorable Court on *certiorari*.

THE SALES IN CONTEMPT.

The complainants' affidavits in this proceeding show conclusively the sales since October 29, 1906, by the defendant company, and its officers, agents, etc., at its place of business, No. 53 E. 11th street, New York City, N. Y.,—its former place of business. The first affidavit is that of Thomas W. Luck (Contempt Rec., p. 10), and bill attached, Marked "Luck Bill" (Contempt Rec., p. 11), who, on November 8, 1906, purchased seven Imperial Records over the counter at said store, at sixty cents each, making $4.20. Also by the affidavit of Charles M. Hemenover (Contempt Rec., p. 12), who, on November 9th, 1906, at the same place, purchased five Imperial Records. Also by the affidavit of Charles K. Bennett (Affidavit No. 2), (Contempt Rec., p. 19), who shows that on November 7, 1906, at the same place, he purchased two records from the said defendant company, one of which, "King Cotton," No. 45269, he paid sixty cents for, and for the other of which, "Carmen," No. 15365, he paid $1.50.

All of these purchases above mentioned were made by the purchasers in the ordinary course of business, going into the store of the defendant company, at 53 E. 11th street, and stating to the salesperson who came to wait upon the respective parties that he wished to buy some records for talking machines. The would-be purchasers were then given catalogues, from which they picked out certain numbers or selections, and told the salesperson which records they desired to purchase. These records were then taken by the salesperson from the defendant's stock of goods, and delivered in each case personally to the purchaser, who then and there paid the price asked for them.

No questions were asked by the defendant's agent or representative, as to what use they were intended to be put, and the said defendant's records were sold

in the ordinary course of business, and were, as shown by the affidavit of H. C. Kennedy, Contempt Rec., pp. 24 and 25, the same in all material respects as the disc records sold by the defendant prior to the suit, and which the defendant, its officers, etc., were enjoined from selling by the injunction order served October 29, 1906.

The complainants' affidavits (Contempt Rec., pp. 13 to 19), of Albert Platz, George M. Thompson and Charles K. Bennett (Bennett affidavit No. 1) also show purchases in the ordinary course of business by these parties from the defendant, at its store, No. 53 E. 11th street, New York City, N. Y., in November, 1906, since the date of the service of the said writ. In these last mentioned instances not only were the defendant's said records sold to Platz, Thompson and Bennett in the ordinary course of business, but also with the knowledge that they were to be used in connection with the reproducing apparatus of the Victor Talking Machine of the complainants' manufacture, in accordance with the said patent No. 534,543, in suit, claims 5 and 35.

The affidavit of Albert Platz (Contempt Rec., pp. 13-14) shows that on November 4, 1906, he wrote and mailed a letter to the defendant company, addressed to 53 E. 11th Street, New York City, N. Y., on his letter head, a copy of which is attached to his affidavit. This letter head contained in the left hand corner a picture of the Victor Talking Machine Company's trade-mark, "His Master's Voice," the dog listening to the talking machine with the word "Victor" printed thereon; in the center of the sheet are printed the words "Albert Platz, Exclusive Dealer in Victor Machines and Records, 344 Devoe Street, Brooklyn, N. Y., 190 ." This letter was dated November 4, 1906, addressed to Messrs. Leeds & Catlin, the defendant, and stated (Contempt Rec., p. 14):

"You will notice from my note head that I am a dealer in Victor Talking Machines and records exclusively, I would like to handle the Imperial record. Kindly write me and quote dealer prices.

Yours &c.,
ALBERT C. PLATZ."

To this letter, Albert C. Platz received a reply from the Leeds & Catlin Company, dated November 7, 1906, a copy of which is attached to the Platz affidavit, marked "Complainants' Exhibit, Platz Leeds Letter." This letter stated that in reply to the Platz letter of the 4th inst. the defendant enclosed a catalogue of its Imperial Records, and stated (Contempt Rec. p. 15):

"We will be pleased to sell you these at 30 cents each F. O. B. Middletown, Conn. They are acknowledged to be the best records on the market, being loud, clear, sweet-toned and up-to-date in every respect. The retail price of the Imperial Record is 60 cents each.

"Hoping to receive your order, we remain
"Very truly yours,
"Leeds & Catlin Company,
"By H. Leeds, Jr.
Dictated. Enclosure."

In reply to this last mentioned letter, Platz wrote the defendant, ordering two dozen of the defendant's records, the order comprising two each of a dozen selections which he picked out from the catalogue sent him, and the said Platz enclosed in the said reply a post office money order for $7.20, in payment of said records, which replying letter (Contempt R., p. 59) he mailed with the money order on November 14, 1906.

On November 16, 1906, Mr. Platz personally called at the defendant's store, 53 E. 11th street, New York City, and introduced himself, and stated that he had written the defendant on November 4, 1906, to which

they had replied by the defendant's letter of November 7, and asked the defendant's representative when the defendant would be able to deliver the records which he had ordered by letter of November 14th, and was told that he would probably receive them on Monday, the 19th inst. Mr. Platz then told the defendant's representative that he would like to have the records at once, and asked that he supply him with the said records, and twenty-three of the said records ordered by Platz, by his letter of November 14, 1906, were delivered to him personally at the said store of the defendant, by the defendant's representative, on November 16, 1906, for which he paid the defendant's representative at the time the sum of $6.90, and received a receipted bill therefor, which is attached to the Platz affidavit, marked "Complainants' Exhibit, Platz Bill" (Contempt Rec., p. 16), which records are produced in this proceeding, together with the other records purchased.

The said George M. Thompson, on Wednesday, November 7, 1906, also purchased six of the defendant's said records, for which he paid the sum of $5.35, which are offered in evidence in this proceeding (Contempt Rec., p. 19). The said Thompson asked the said salesman, at the time of said purchase, whether he could use the said defendant's records so purchased on a talking machine of the manufacture of the Victor Talking Machine Company, to which the salesman replied that he could.

The said Charles K. Bennett, by affidavit No. 2 (Contempt Rec., p. 19), shows in addition to other facts, that he accompanied Mr. Thompson on November 7th to the defendant's store on the occasion of this visit, and that after the said Thompson had made the selection of the said defendant's records, Thompson asked the salesman "whether the said records which he had selected could be used on a machine manufac-

tured by the Victor Talking Machine Company, and the attendant told him that they could be so used" (Contempt Rec., p. 20).

The said Charles K. Bennett, also shows, by affidavit No. 1 (Contempt Rec., pp. 16 and 17), that on November 2, 1906, he went to the said store of the said Leeds & Catlin Company, No. 53 E. 11th street, New York City, and told the defendant's representative who waited on him that he desired to purchase Imperial Records, sold by the defendant company, and that the said representative of the defendant company sold him, on this occasion, six of the said defendant's records out of the stock in the establishment, which said records are produced in evidence in this proceeding, marked "Complainants' Exhibit, Bennett-Leeds & Catlin Records, Nos. 1 to 6 respectively." The said Bennett picked these out of the defendant's catalogue, handed him by the defendant's representative, and paid sixty cents each for four of the said records, and one dollar each for two of the same. The said Bennett affidavit also shows that he told the said salesman at the time of the said purchase that he had a talking machine manufactured by the Victor Talking Machine Company, and asked the salesman if these records thus purchased could be used on this Victor talking machine, and was told by the said representative of the defendant that he could use the said defendant's records on the said Victor talking machine (Contempt Rec., p. 17). The said salesman also, on the same occasion, told the said Bennett that he, the said salesman, had at his home a Victor talking machine, on which he played some of the records. The said salesman handed the said Bennett, on this occasion five catalogues, containing a list of the different disc records of the defendant's manufacture, which catalogues are produced in evidence in this proceeding, attached to said Bennett affidavit No. 1, marked "Bennett, Leeds

& Catlin Company Catalogues, Nos. 1 to 5" (Contempt Rec., p. 17).

It is shown by the complainants' proofs, we submit, that the defendant is continuing the sale of the infringing records, for the same purposes, in the same manner, as prior to the injunction.

THE INFRINGING APPARATUS THE SAME IN THE LEEDS & CATLIN CASE AS IN THE ADJUDICATED SUIT AGAINST THE GRAPHOPHONE COMPANY.

The opinions of the U. S. Circuit Court of Appeals and the Circuit Court are on pages 73 and 63, of the Injunction Record.

The defendant contends that as the infringing apparatus, comprising the combination of the reproducing stylus and disc records, both in the Graphophone case and in the Leeds & Catlin case, were substantially the same as the complainants' patented reproducing apparatus and records, and as infringement was not denied, that there was no expression of opinion by the Court as to what constituted an infringement of claims 5 and 35, of the patent in suit.

If the defendant, at the present time, was manufacturing and selling a distinctively different device from that which the defendant in the Graphophone case, or in the injunction proceedings in this Leeds & Catlin case, had been selling, there might be some excuse for suggesting this question, but as the disc records which the defendant continued to sell after the injunction of October 29, 1906, are identically the same as those which it previously manufactured and sold and which it never stopped making or selling for use in combination with the reproducing stylus of the claims, and which it was enjoined from making and

selling, there can be no excuse for the raising of this question.

Further, as hereinafter more particularly pointed out, the decision of Judge Hazel, in the Graphophone case (Inj. Rec., p. 63), affirmed by the Court of Appeals, for the Second Circuit (Inj. Rec., p. 73), as well as the decision of Judge Townsend, in this Leeds & Catlin case (Inj. Rec., p. 318), also affirmed (148 Fed. Rep., 1022), considers very fully the importance and function of the record, in combination with the reproducing stylus, there can be no room for doubt that the contempt records form an essential part of the combination with the reproducing stylus of claim 35, for operation in accordance with the method of claim 5.

THE DEFENDANT NEVER WAS A MANUFACTURER OF DISC MACHINES, BUT WAS, AND CONTINUES TO BE, A MANUFACTURER OF THESE DISC RECORDS.

The defendant's business, before suit, and which it has continued since the injunction, is the manufacture and sale of disc records. It never manufactured disc machines, but only *sold* a few, which it took in part payment from the Talk-O-Phone Company at one time. (See affidavits of Edward F. Leeds, Inj. Rec., p. 292, fol. 876; also Irish, Inj. Rec., p. 284, fol. 851.) This is admitted by defendant's counsel, and not disputed.

It is, therefore, apparent that the defendant company is continuing to do the same infringing acts, since the injunction has been served, as before that time, viz., the sale of records forming a material element of the combination claimed in claim 35, for use in infringement of the method specified in claim 5.

The defendant cannot now say that these contempt records were sold for the purpose of any other use than that for which they were made and sold prior to the injunction.

Not only is the intent of the use to be determined by the acts of the defendant, but it is also clearly shown by these complainants' affidavits, as herein pointed out.

The defendant is chargeable with the natural consequences of its acts.

Thomson-Houston Co. *v.* Ohio Brass Co., 80 Fed. Rep., 712;
Am. & Eng. Enc. of Law, Vol. 22, 2d Ed., p. 463.

THE ELEMENTS OF CLAIM 35 AND THE METHOD OF CLAIM 5.

The defendant seeks to ignore the value and importance of the disc record, or traveling tablet, with the sound record thereon, of claim 35, and to emphasize the greater importance of the sound reproducing apparatus of the said claim. Defendant's counsel states that the sound reproducing apparatus is the vital element. This, however, is a mere voluntary statement on his part, unfounded in fact, and not warranted by the decisions of the Courts.

The fact is that this disc record, having the lateral undulations representing the sound waves formed in the side walls of the spiral groove of even depth, extending from the periphery to a point near the center, is a most important mechanical element, if not the most important of the combination. Claim 35 is composed of two elements,—the record just described, and the sound reproducing stylus, shaped for engage-

ment with the record, so mounted as to be free to be vibrated and propelled by the record.

It will be seen that the little undulations in the side walls of the spiral groove operate mechanically as a double cam, to pulsate the stylus point back and forth in transmitting the recorded sound waves to the diaphragm, and at the same time propelling the reproducing stylus from the beginning of the spiral groove, near the periphery, to a point near the center.

As to the reproducing stylus, it is only necessary that it should be shaped for engagement with the record, and so positioned and supported as to be free to be vibrated and propelled by the record.

As fully set forth, and decided in the suit against the American Graphophone Company (Inj. Rec., p. 63 and 73), the ways in which the reproducing stylus may be mounted, or supported, are several; one way is upon a pivoted swinging arm, such as shown in Figure 3, of the patent in suit, though this is only one way; another way is that shown in Figure 10, of the Berliner Patent, No. 564,586, filed November 7, 1887 (Injunction Record, p. 465), where the stylus and the sound box are supported on a horizontal roller so as to travel across the record disc. Berliner, in the "Electrical World," of November 12, 1887 (Injunction Record, p. 244), shows that sound may be reproduced from one of these records by holding a sharply pointed bamboo stick between the teeth and pressing the point lightly into the rotating groove, "Or a mounted diaphragm having connected to its center a flat stylus similar in form to the recording one, but of shorter leverage—as shown lying on the table in the engraving (Figure 1, Injunction Record, p. 243), is so placed above the groove that the bent point of the flat spring also presses lightly into the groove. Or a large wooden

resonant box is connected to the groove by a stick having an ivory or boxwood point."

"Another way is to mount the phonautogram on a circular, wooden, resonant box, which simply rotates without progressive motion, and to press an ivory point into the groove. In this case the hand which holds the ivory easily follows the groove, and the point is *led* along the volute of the record, and vibrates the sound-box by undulatory shocks." He then also describes the construction similar to that shown in Figure 10, of the Berliner Patent, No. 564,586 (Inj. Rec., p. 465).

This is merely cited to show that all that is required of a reproducing stylus forming part of the combination with the record is that it shall be shaped for engagement with, and so mounted as to be free to be vibrated and propelled by the record. As before pointed out, the record disc is a most important and vital mechanical element having the volute, or spiral groove for propelling the stylus mechanically, and the cam-like undulations in the walls of each side of the groove for positively vibrating, or "kicking," the stylus point mechanically back and forth, positively, in a double cam like action, while, at the same time, the volute, or spiral groove propels the stylus point.

An examination of claim 35 will show that this disc record, or traveling tablet having a sound record formed thereon, is a most important and vital element of the combination.

It also performs a most vital and important function in the method of claim 5.

The claims read:

> "5. The method of reproducing sounds from a RECORD of the same which consists in vibrating a stylus and propelling the same ALONG THE RECORD BY AND IN ACCORDANCE WITH THE SAID RECORD, substantially as described."

"35. In a sound reproducing apparatus consisting of A TRAVELING TABLET HAVING A SOUND RECORD FORMED THEREON and a reproducing stylus shaped for ENGAGEMENT WITH SAID RECORD and free to be VIBRATED AND PROPELLED BY THE SAME, substantially as described."

This disc record has always been formed in hard, durable material, and they have commonly been identified and referred to as indestructible records. They were originally, at the time of the invention of the patent in suit, formed in metal, such as zinc, and the reproduction being had directly therefrom in the combination of claim 35. They are now commercially made in hard, durable material, such as hard rubber or like material, having great wearing qualities, being material into which the record may be pressed from the matrix, soft while heated, and extremely hard when cooled under pressure, such as the disc records in evidence in this case.

DURABILITY OF THE DISC RECORDS.

The complainants' hard disc records may be used, ordinarily, as many as 500 times, without any depreciation in tone to the average ear. This is the testimony of A. C. Middleton, an expert, who, as shown by his affidavit, has given a great deal of time and study to the examination and test of these complainants' records (See Middleton affidavit, Contempt Record, pp. 26-27).

Of course, as stated by Mr. Middleton, inferior records, made of inferior material, such as many infringing records, will show wear in comparatively short time, in perhaps 50, or 60 reproductions, or sometimes less. Records can probably be made which will show wear in one or two reproductions, as suggested by

some of the defendant's affidavits, and may not reproduce at all.

The complainants' records sold with its machines, and for use upon complainants' machine, are made of the best and most durable material, as stated by Mr. Middleton (Contempt Record, p. 27):

> "The material of which the complainants' records are and have been made since the complainants have been manufacturing records is of the best and most durable character known to us for this purpose."

The fact is, that complainants' disc records do not, as a rule, wear out, if at all, as users of these disc talking machine records usually have a large repertory with different selections. Mr. Middleton shows (Contempt Record, p. 22), that an owner of one of complainants' disc machines costing about $25.00, will frequently spend as much as $100.00 for records. Many of the complainants' records are sold at 35 and 60 cents; at this price, the owner would have at least 200 of complainants' records purchased from the complainants. If he paid an average of a dollar a record, which is not probable, he would have at least 100 records. As stated by Judge Lacombe, in the decision holding the defendant in contempt (Contempt Record, p. 74), new records are "bought more frequently in order to increase the repertory of tunes than as substitutes for worn-out discs."

The complainants, as admitted, sell their records with the reproducing stylus, and the purchaser is at liberty to buy then, or later from the complainants, as many of complainants' records as he desires. It is a large part of the complainants' business to manufacture and sell these records for use in reproducing sound on complainants' machines, as shown by affi-

davits of Mr. Middleton and Mr. Haddon (Contempt Record, pp. 22 and 24).

A repertory of even ten of complainants' records to a machine, which is a low estimate, would mean, before any appreciable wear occurs, 3000 reproductions at 300 to each record. Or at Mr. Leeds' estimate of 60 reproductions to a record, would mean 600 for 10 records before any appreciable wear, and 6000 if the user, as he frequently has, as stated by Mr. Middleton, 100 records.

Mr. Middleton states that from his most careful actual test that 500 reproductions may be had from each record without any depreciation in tone to the average ear; this would mean for 10 records, 5000 reproductions before even any appreciable wear to the average ear; and for 100 records, 50,000 reproductions.

It is also clear that complainants' records are, and may be continued to be used with very satisfactory results, even after some slight depreciation in tone might occur, after 500 reproductions. And the fact is, that these records are kept and used by the owners of complainants' reproducing apparatus for years.

The fact is, as known by all users of complainants' machines and disc records that the records practically rarely become useless.

It will also be observed that defendant's affidavits of Mr. Bunker, and Mr. Moeller (Contempt Record, pp. 61 and 67), in testifying as to the number of reproductions of which a record is ordinarily capable, do not specify that this is true of the material of which *complainants'* records are made. It might be quite possible that records made of inferior material, such as some of the infringing records, would wear in the manner indicated, but this is not true of the complainants' records, as shown by Mr. Middleton's affidavits

(Contempt Record, pp. 20 and 26). The affidavit of Mr. Edward F. Leeds, on behalf of the defendant (Contempt Record, pp. 37-38), does refer to complainants' records, but it is clear that the tests made by Mr. Middleton, and who is connected with the complainant company, shows him very much better qualified to testify on this point than Mr. Leeds. Mr. Leeds makes several general statements regarding the matter, while Mr. Middleton shows the character of his tests, and at all events, from his intimate connection with the complainant company since its organization in 1901, is better qualified to testify upon this subject.

RE DEFENDANT'S CONTENTION THAT FLAT DISC SOUND RECORDS EXISTED BEFORE THE DATE OF THE INVENTION OF THE PATENT IN SUIT.

Even if this were true, it would be immaterial, as claim 35 is for the novel combination of the record, and reproducing apparatus, so that the latter is free to be vibrated and propelled, and claim 5 is for the novel method; the defendant, however, does not show the statement to be true that these disc records, having laterally undulating grooves of even depth of the Berliner type were old prior to the date of the invention of the patent, in suit.

The Court of Appeals, for the Second Circuit, in the opinion in the Graphophone case (Injunction Record, p. 73), has held that the date of invention goes back to November 7, 1887, the date of filing of the Berliner Patent, No. 564,586, which issued July 28, 1896. The invention of the patent, in suit, was, therefore, made at the time that the record was shown in the Berliner Patent, No. 564,586, and in the "Electrical World," of November 12, 1887.

RE MECHANICAL FEED.

The defendant spends considerable time, and space, in the consideration of so-called mechanical feed machines.

It is submitted that it makes no difference, in this case, if mechanical feed machines did exist prior to the date of the patent, in suit, if they were not in commercial use at the time of the sales of the contempt records.

The fact that Mr. Berliner showed in his patent, No. 564,586, that he could also reproduce the record on the positive feed recording machine shown in Figure 1, in no manner detracted from his great pioneer invention disclosed in that patent, No. 564,586, filed November 7, 1887, and subsequently claimed in claims 5 and 35, of the patent in suit, which he had a right to do as decided by the Court of Appeals, in the Graphophone case (Inj. Rec., p. 73). This fact in no manner detracted from this basic invention which revolutionized the talking machine art, and in which the record became at once the vibrator, and propeller to feed the reproducer, and in the conception and completion of which Mr. Berliner departed radically, from the prior art represented by the graphophone and phonograph.

It is clear, in regard to the so-called "mechanical feed" device, of which so much is made in the affidavits, that nowhere is it shown that the defendant sold any of these so-called "mechanical feed" devices, nor is it shown by any of the affidavits that these so-called "mechanical feed" devices ever have been or are upon the market to-day. There is an entire absence of any proof on the part of the defendant that there is any so-called "mechanical feed" reproducing apparatus upon the market or in general use to-day, upon which

the contempt disc records of the defendant company could be used.

There is, however, on the other hand, positive evidence on the part of the complainants, in their moving papers that there is no such so-called "mechanical feed" device to-day upon the market, or in general use, and never has been.

The mere fact that the defendant may have used, at its office, or store, in testing records, a so-called "mechanical feed" device, is no excuse for the sale of these Imperial records since the injunction, with the knowledge that they could be used, and doubtless would be used in connection with the reproducing apparatus forming the other element of the claim of the patent in suit.

Before the injunction the defendant sold the same records for use in combination with the reproducing apparatus of the patent as decided by Court of Appeals. In selling since the injunction the records sold would be devoted to the same uses by the purchasers, and the defendant knew it.

As herein shown, the sales of the records to Luck, Hemenover (Contempt Rec., p. 10 to 12), and to Bennett (Contempt Rec., pp. 19-20), (Bennett Affidavit No. 2) were made by the defendant without any inquiry as to what reproducing apparatus they were to be used in connection with. The sales to Platz (Contempt Rec., p. 13 to 14) and Thompson (Contempt Rec., p. 18 and 19) and another sale to Bennett (Contempt Rec., p. 16 to 17) (Bennett Affidavit No. 1) were with the express understanding that they were to be used in connection with the Victor talking machine.

In regard to the so-called "mechanical feed" machine, the complainants most strenuously contend that this machine is gotten up as *a mere attempted evasion of the patent in suit;* that it does not evade, and merely

contains a superfluous mechanism, which performs no useful function, without which the machine would operate more satisfactorily than with it; and that the defendant is merely making use of this machine as an excuse for selling the records which it was enjoined from selling, contending that if such a machine existed, the records they sold might be used with it, and, therefore, even though the records sold should be used in infringement of the patent, the defendant would be excused.

A careful reading of the defendant's affidavits is invited, as otherwise they might be misleading. These affidavits in behalf of the defendant are adroitly worded to create the impression that such so-called "mechanical feed" machine is upon the market, but a careful reading discloses the fact that, with the same adroitness, absolutely no evidence is produced to support this contention, and that the defendant has studiously refrained from asserting one fact, beyond the mere vague intimation that such machines are marketed. The attempt appears to be to create the impression that the defendant has been engaged since the injunction in selling the so-called "mechanical feed" device, and in selling the records in connection therewith, and that the so-called "mechanical feed" device of various makes is upon the market. The affidavits, however, do not so state, as will appear upon a careful inspection, and might be misleading in this respect.

The defendant's contempt records were not sold with any label containing restrictions that they were sold for use in connection with the so-called "mechanical feed" device, as intimated in the affidavit of Edward F. Leeds (Contempt Rec., p. 32), **and even if the said labels were on the records, and they were not upon the contempt records,** it would make no difference, among other reasons, for the reason that the language of the label does not restrict the use of the

record to the so-called "mechanical feed" device, but merely states "it is sold for use on mechanical feed machines." None, however, of the Contempt Records had this label thereon.

While it is true, as stated in Mr. Hicks' affidavit (Contempt Rec., p. 69), that complainants' counsel made the statement in the Circuit Court on the injunction proceedings, that he presumed "that the Court does not desire without the benefit of a full discussion to say, upon these motions, whether these so-called 'mechanical feed' machines are, or are not, mere attempted evasions of claims 5 and 35, of the patent in suit," yet the fact remains, as hereinafter more fully pointed out, that the defendant's counsel, in his brief in the Court of Appeals (page 195, of defendant's brief attached to the petition for *certiorari* in the Injunction Proceedings), presented a very full argument relative to this question of so-called "mechanical feed" machine, and the effect of the sale of records which might be used thereon. The matter was thus quite fully before the Courts in the injunction proceedings. This defence, therefore, should not be available as an excuse in these contempt proceedings.

As shown by the affidavits of Mr. Middleton and Mr. Haddon (Contempt Record, pp. 21 and 23), at the time the Contempt Records were sold, there were in use in the United States, hundreds of thousands of reproducing apparatus of the complainants' construction, designed to be operated in the method of the patent for reproducing sound from disc records similar to the Contempt records, and that said Contempt Records, when sold, could only be used for sound reproduction purposes in connection with this sound reproducing apparatus referred to, which, in combination with the records, forms the subject-matter of this suit.

The mechanical feed machines, in combination with the vertically undulating record of uneven depth rep-

resented the prior art, and was the only commercial talking machine before Mr. Berliner's invention, in suit, as has been decided. (See decision of Judge Hazel, in Graphophone case, Injunction Record, p. 67, fol. 201). Judge Hazel, stated, *inter alia*:

> "Concededly, the lateral undulations in the record automatically guide or propel the stylus and diaphragm in its course over the disc from the outer circumference toward the center, and the stylus travels in an apparently direct radial path while at the same instant of time it is pulsated or incited by the sound waves. The principle of operation in the Berliner machine is thought to be essentially different from that of the machine of Bell & Tainter. In the latter, an auxiliary joint or feed screw was necessary, as already stated, to effectuate the required passage of the record over the point of the stylus, or to cause the stylus and reproducer diaphragm to travel across the surface of the record. In complainants' patent, on the other hand, it is shown that the lateral vibrations of the stylus point and the propelling of the same over the surface of the record without mechanical assistance and through the means of the groove alone was the primary object of the inventor.
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> * * * * * * *
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> "By such adaptation to what is known in the art as a zigzag record (Complainants' Record) certain imperfections in the talking machines were overcome, and sound, when reproduced, was rendered more intelligible. There was, I think, patentable novelty in the method which accomplished the results stated.
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> * * * * * * *
>
> "The essence of such claims would seem to include a sound record, which, when in juxtaposition with a diaphragm and stylus propelled in the manner described, is thereby enabled to successfully accomplish the primal object and purpose of the invention."

The very nature, construction and operation of the prior Edison phonograph, and of the Bell & Tainter graphophone, required the positive auxiliary feed screw for propelling the stylus point over the record, or the record past the stylus point, and had many objections, among others, the difficulty of maintaining the proper relation and pitch between the auxiliary screw feed, and the spiral of the record groove so as to keep the reproducing point always in intimate contact with the record in the groove. The character of Mr. Berliner's invention, obviated all this difficulty, and provided a means and method of always keeping the stylus point in intimate, and exact corelation with the record in the groove, the record groove being at one and the same time, the vibrator and propellor. This was all passed upon, and fully decided in the Graphophone case by The Court of Appeals, for the Second Circuit (Inj. Rec., p. 73).

RE JUDGE LACOMBE'S DECISION, HOLDING DEFENDANT IN CONTEMPT.

Judge Lacombe's decision, filed January 5, 1907, is on page 74, of the Contempt Record, and holds the defendant in contempt, imposing a fine of $1000, one-half to be paid to the United States, and the other half to the complainants. The decree for contempt is contained on page 75, Contempt Record.

By separate orders, preliminary injunction and payment of the fine was stayed, pending appeal, the defendant, however, being required to enter bond in $10,000, and to file monthly statements.

The decree found that the defendant had violated the injunction by subsequently selling records of claim 35, with the intent that the said records should be used in combination with the other elements of that claim in machines sold by the complainants, or their licensees,

combined with such records, for use in carrying out the method of claim 5.

The defendant's counsel seems to think that Judge Lacombe entertained doubt upon the question, by reason of the fact that he stayed the order pending appeal. We understand, however, that this is quite customary in said circuit, in cases where the appeal may be heard within a reasonably short time after the decree in the court below, and that no inference of this character is to be drawn from that fact. The contention is certainly not warranted, as stated in defendant's brief, that the question involved in the contempt proceedings was not covered by Judge Townsend's decision on the preliminary injunction. As hereinbefore pointed out, Judge Townsend's decision and decree were so abundantly broad and sweeping as to include the manufacture and sale of these records for this infringing use, as clearly appears from the decision and decree.

The decree (Injunction Record, p. 328) enjoins the defendant from manufacturing, selling, or using "sound reproducing apparatus or devices embodying the subject-matter of Claim 35."

The words "sound reproducing apparatus" are taken from claim 35, and are stated in that claim to consist "of a travelling tablet having a sound record formed thereon and a reproducing stylus—"etc. It is, therefore, clear that the words "sound reproducing apparatus" used in the decree, mean the combination of the traveling tablet, or record disc, and the reproducing stylus. The decree could not be more explicit for the purpose of enjoining the record of this combination, had it specifically used the word "record."

The fact is, however, that it does specifically include the record as the decree quotes claim thirty-five, which embodies "a traveling tablet having a sound record formed thereon."

The decree also enjoins the defendant from manufacturing, using, or selling, etc., apparatus, or devices "which embody the method specified in claim five,"—"and from using or employing *in any way* the method specified in said claim five."

The defendant at the time that this decree was entered and it was enjoined, was engaged in the manufacture and sale of records, not machines, and this was the business which it continued without interruption, notwithstanding the injunction.

A more willful violation could hardly be imagined.

This was also passed upon, very fully, by Judge Hazel in the Graphophone case, (Inj. R. p. 63) affirmed by the Court of Appeals, for the Second Circuit, (Inj. R. p. 73) where Judge Hazel most clearly defined the importance of the record of the combination, and entered a substantially similar decree.

NO DOUBT EXPRESSED IN JUDGE LACOMBE'S DECISION ON CONTEMPT.

Defendant's counsel, in his brief, accompanying the petition for writ of *certiorari*, under the heading of Decree for Contempt, page 13, refers to an alleged statement by Judge Lacombe at the settlement of the decrees relative to an alleged doubt in Judge Lacombe's mind regarding his decision. There is no record, whatsoever, to support this statement, and, therefore, it is unnecessary to ask this Court that no consideration be given it.

A careful reading of Judge Lacombe's decision, (Contempt Record, p. 74) does not indicate that there could be much doubt upon the question of the contempt.

Defendant contends that there was no finding that the contempt records sold by the defendant were ever

used upon any machine of any kind for the reproduction of sound.

The defendant apparently contends that the finding that there was an "intent" on the part of the defendant that the contempt records so sold should be so used, is in error.

It is held by Judge Lacombe, that this was clearly contributory infringement, and requires no serious argument to show that the proof of an "actual use" was necessary where the intent that they should be so used was proven. This intent is clearly shown by several of complainants' affidavits, as hereinbefore pointed out, such as Platz, Thompson and Bennett to whom the defendant sold the contempt records with the knowledge that they were to be used in connection with the reproducing apparatus of the Victor Talking Machine Company.

The Platz letter of November 4, 1906 (Contempt R., p. 14), ordering records of the defendant, specifically stated that he dealt exclusively in Victor talking machines and records, and the said records were subsequently sold to the said Platz by the defendant. (See defendant's reply letter of November 7, 1906, etc., Contempt R., p. 15.)

No further proof, we submit, is necessary. The defendant sold the contempt records over the counter, as shown by complainants' affidavits in some cases with the knowledge that the purchaser had a Victor talking machine, and in other cases without any inquiry as to how they were to be used, but manifestly with the knowledge that there were no mechanical feed machines in commercial use, and that there were hundreds of thousands of reproducing machines constructed in accordance with the complainants' patent, in use in the country, for which defendant's records were especially adapted.

The defendant, however, does not seem seriously to dispute this proposition, but mainly relies upon the defense that this alleged right to sell, to complainants' purchasers of machines and records, additional records for the purpose of so-called repair, or substitution, or improvement as set forth in Defendant's Brief accompanying the petition for writ of *certiorari*.

Defendant relies upon the theory that when complainants sold the patented reproducing apparatus and records to a purchaser, the device, including the combination of the apparatus and records, was released from the monopoly, and that a purchaser had a perfect right, therefore, to buy from unlicensed parties other records forming an essential part of the combination, to add to his collection of the records purchased from complainants for the purpose of increasing his repertory or for practically any other purpose.

The defendant also necessarily contends, that a manufacturing concern has a right to manufacture this essential element of the two essential elements of the combination for use in accordance with the patented method, and to sell the same to the purchaser of such patented combination.

THE DEFENDANT'S EXCUSES FOR SELLING THE CONTEMPT RECORDS.

The defendant on November 28th, 1906, filed an answer (Contempt R., p. 28) and affidavits (Contempt R., p. 30) in reply to complainants' Petition for Contempt, making a general denial of infringement since the injunction, and bases its denial upon certain excuses for the acts, which we claim were done in contempt of court.

It is apparent, we submit, from the very nature of the excuses set forth in defendant's affidavits, that they are strained and untenable, and appear to be devised

for the purpose of evading the decree of the courts below.

The defendant, in support of its answer, has filed five affidavits, by the following parties, viz.; Edward F. Leeds, President of the defendant company, (Contempt Rec., p. 30 and 72); Louis H. Bunker, who says he sold the defendant's records, at defendant's store, since the injunction, but was acting, not as an employee, but as a "friend" (Contempt Rec., p. 60); Loring F. Leeds, who does not state how he is connected with the defendant company, or what his relationship to the president is (Contempt Rec., p. 63); Leo Moeller, (Contempt Rec., p. 65) an employee, and Louis Hicks, defendant's counsel (Contempt Rec. p. 68). To certain of these affidavits are attached copies of certain advertisements of the defendant, etc., referred to in the affidavits to which they are attached.

The principal excuses presented by the defendant in the attempt to absolve it from the contempt charged, in selling after the injunction the same sound records as it made and sold prior to the injunction, are, in substance:

(1) That the defendant thought that it could sell these disc records, as such records could be used, or might possibly be used, upon a so-called "mechanical feed" talking machine.

(2) That because the complainants had sold large numbers of reproducing apparatus, including a reproducing stylus and the records, the defendant thought it was free to make and sell disc records which could be used on such of complainants' apparatus in the hands of those who had purchased them, on the basis of the so-called doctrine of "repair."

(3) That the defendant excuses its contempt acts on the basis that the record is a perishable temporary

part of the combination, and that, therefore, it had the right, as a manufacturer, to make and sell to purchasers of complainants' reproducing apparatus, disc records similar to the complainants', as a substitute or addition to the complainants' apparatus.

(4) That because the complainants did not place any label on the records or machine, restricting the use of the reproducer to the combination with the complainants' record, and the use of the record to the combination with complainants' reproducer, specified in claim thirty-five, that, therefore, the defendant was free to supply records.

(5) That the complainants' disc record was not patented separately and by itself; therefore, defendant had the right to supply the records for use in the patented combination.

(6) That the defendant had a right to make and sell records for export to foreign countries.

(7) That the complainants sometimes sold the reproducing device without any records being sold with it; that, therefore, there was an implied license to the defendant, or any other manufacturer, to manufacture, and sell records to the purchaser, notwithstanding the fact that a large part of the complainants' business is devoted to supplying the record disc, the other part of the combination of claim thirty-five, which is advertised most widely and known to the world.

It is respectfully submitted that a careful reading of the defendant's affidavits, in connection with the complainants', will show that the defences raised are manifestly without foundation, and are devised for the purpose of evading the decree of the Courts below and to relieve the defendant, and its officers, of the contempt charged.

THE DEFENDANT'S ARGUMENT BASED ON A FALSE PREMISE.

The Disc Sound Record or "Traveling Tablet Having a Sound Record Formed Thereon," is Not a Perishable Temporary Part of the Combination.

The argument of defendant's counsel is, throughout the whole brief, based upon the erroneous assumption and false premise, not supported by the weight of the evidence, that the sound record is a perishable, temporary part of the combination, in the same sense as the toilet paper in the case of Morgan Envelope Co. *v.* Albany Paper Co. is (40 Fed. Rep. 577—affirmed 152 U. S. 425). The defendant's brief in the Court below practically bases the whole case upon the decision of the Courts in this case just mentioned. Defendant's counsel contends (Def. Brief, accompany the petition for writ of *certiorari*, p. 16):

(*a*) That the perishable temporary character of the record is established by the evidence; and

(*b*) That a mere inspection of the reproducing apparatus and consideration of the wear on the record is alone sufficient to establish the point.

Defendant's counsel goes so far as to argue that the testimony of complainants' experts shows that this point is undisputed.

This latter assumption is illustrative of the misleading construction which defendant's counsel seeks to place upon the proofs.

As stated by Judge Lacombe, new records were "bought more frequently in order *to increase the repertory of tunes* than as substitutes for worn-out discs." (Contempt R., p. 74.) Judge Lacombe, very properly, also held that (Contempt Rec., p. 74).

"Indeed it is difficult to escape the conviction that the larger part of defendant's sales were contrived by them to enable the owners of reproducers purchased from complainant or its licensees to produce such musical pieces as such owners might desire to hear, through the co-operation in combination with such reproducers of records made by defendant instead of records made by complainant."

Judge Lacombe also stated (Contempt Rec., p. 74):

"This seems to be a case of contributory infringement—an entirely voluntary and intentional one, not in any wise excused by the circumstance that complainant had theretofore sold reproducers combined with other records to such owners (Am. Graph. Co. *v.* Leeds, 87 F. R. 873)."

It will thus be seen that Judge Lacombe has held that the purchase of new records by owners of the reproducing portion of the combination is principally for the purpose of *increasing the repertory of tunes.* In other words, Judge Lacombe has found that, in the main, *the new records are not sold* as substitutes for worn-out discs, but "in order to increase the repertory of tunes."

The defendant's counsel proceeds to base the main portion of his argument upon an inference which he draws from Judge Lacombe's decision, that some of the records are sold as substitutes for worn-out records, and attempts to establish what he terms "the fundamental principle of defendant's contention," that the purchaser of reproducing apparatus made and sold by complainant, or its licensees, has the right to substitute new records made by the defendant, for use in the combination of the patent, when the old record is worn out, or useless through any other cause.

Defendant further reasons from this, that the purchaser, if he has the above right, has also the right to

substitute a new record for the record originally purchased, as part of the combination, no matter whether the old record is worn out or useless, and that the purchaser has the implied right, having purchased one machine and one record from the complainant, or its licensees, to purchase *a hundred,* or *a thousand records,* for use in the combination, from one who is not a licensee.

It will thus be seen that the defendant attains his conclusion from—

(*a*) A false premise, viz., that the disc record or "traveling tablet having a sound record formed thereon" is a perishable temporary part of the combination; and

(*b*) If he has the right to repair a worn-out vital element of the combination, he would also have the right, even though this vital element of the combination was not worn out, to make and use hundreds, or thousands, of other records, having the same, or different, selections thereon, forming a vital element of the combination to increase his repertory of tunes, or for any other purpose.

THE REPRODUCING STYLUS, THE SECOND ELEMENT OF THE TWO ELEMENTS OF THE COMBINATION OF CLAIM 35, A MOST DELICATE ACOUSTICAL INSTRUMENT FOR USE IN REPRODUCING SOUND IN COMBINATION WITH THE HARD DISC RECORD, OR "TRAVELING TABLET HAVING A SOUND RECORD FORMED THEREON."

The defendant, for some reason of its own, has singled out of the combination of claim thirty-five the disc record, or "*traveling tablet having a sound record*

formed thereon," as a temporary perishable element of the combination, and defendant's counsel (Def. Brief accompanying the Petition for Writ of *Certiorari,* p. 18) bases his argument upon the unwarranted assumption that the record is more temporary and perishable than the other element, "the reproducing stylus shaped for engagement with said record," which defendant's counsel says "will last indefinitely for years."

The "traveling tablet having a sound record formed thereon," or disc record, is more durable and permanent than could be ordinarily expected by a purchaser of any acoustical instrument, and as shown by the evidence of Mr. Middleton (Con. Rec., p. 27), the **"complainants' record may be played as many as five hundred times without any material depreciation in tone to the average ear,"** and of course after this the records are then by no means worn out, there being only a slight depreciation in tone to the average ear, and may be used for a long time for ordinary amusement and purposes of ordinary use in the home.

CLAIM 35, A TWO-ELEMENT COMBINATION.

The two elements in this claim are:

(1) "A travelling tablet having a sound record formed thereon"; and

(2) "A reproducing stylus shaped for engagement with said record and free to be vibrated and propelled by the same."

These are the two elements which comprise the "*sound-reproducing apparatus*" of the claim.

This, notwithstanding the statement of Edward F. Leeds (Contempt R., p. 37), quoted on page 18 of defendant's brief accompanying the petition for writ of

certiorari, in support of defendant's position. Mr. Leeds states, *inter alia*:

> "The sound-record is not a part of the sound *reproducing apparatus.*"

With all due respect to Mr. Leeds, claim thirty-five says that the "*sound reproducing apparatus*" consists of the "*traveling tablet having a sound record formed thereon,*" which is the record, and "a *reproducing stylus* shaped for engagement with said record and free to be vibrated and propelled by the same."

This Honorable Court will, therefore, see that we have in this claim thirty-five, which performs the functional method of claim five, *a delicate reproducing stylus,* which while it may have a substantial, durable mounting, so as to allow it to be vibrated and propelled by the record, is a delicate mechanism as compared with the record formed in hard, durable materials.

Apart, however, from the question of the permanency of the reproducing stylus, mounted to be free to be vibrated and propelled by the record, the *Complainants' Records, sold with its reproducer, and for use on its reproducer, are not of a temporary and perishable character, and there is no reliable evidence in this case to support this proposition.*

As before noted, we are considering *acoustical instruments for reproducing sound, which necessarily are of a more delicate character* than machines for rolling railroad rails or milling machines, and may be more readily destroyed and injured by abuse and improper use.

RE DURABLE CHARACTER OF COMPLAINANTS' RECORDS.

The durable permanent character of complainants' records is so apparent, from an inspection of the rec-

ord itself, such as "Compalinants' Exhibit, Complainants' Records," that proof of the fact would seem hardly necessary. Complainants, however, in order to avoid any question, have introduced clear and conclusive evidence of this fact.

MR. MIDDLETON'S TESTIMONY AS TO THE DURABILITY OF COMPLAINANTS' RECORDS.

The affidavit of Albert C. Middleton shows that he has made a special study and test as to the durability of complainants' records, from time to time, at frequent intervals for a period of three of four years past (Middleton affidavit, Con. Rec., pp. 26-27). It was Mr. Middleton's object to see that the material of complainants' records was always up to **complainants' standard,** which is the best. Mr. Middleton, as shown, is, and has been Secretary of the Victor Talking Machine Company since October, 1901. He says, in regard to the material of which complainants' records are composed (Con. Rec., p. 27):

> "The material of which the complainants' records are and have been made since the complainants have been manufacturing records is of the best and most durable character known to us for this purpose."

Mr. Middleton shows how he frequently made tests of complainants' records to find out whether the material was up to standard, and whether the material tended to wear in the reproducing of the recorded sound, and says (Con. Rec., p. 26):

> "I often take a record out of our stock as a sample record and spend practically a whole afternoon and evening continuously testing it on one of

> our reproducing machines, playing the selection over and over again, to ascertain whether the material of the record disc is kept up to our standard, besides other numerous and frequent tests which I make with different records at different times for like purposes. I have been doing this at frequent intervals for three or four years."

Mr. Middleton also states (Con. Rec., p. 27):

> "As a result of my tests, I can positively affirm that complainants' records can be played 250 to 300 times under ordinary conditions, *without any appreciable wear or depreciation in tone.* This is a very conservative estimate; it is my opinion that complainants' records may be played as many as **500 times without any material depreciation in tone to the average ear.**"

Mr. Middleton also shows that some infringing records, may show some wear after being played 50 or 60 times, on account of the poor material used. (Contempt Record, p. 27).

Mr. Middleton also points out that the statement made in Defendant's affidavits, such as that of Leo Moeller, (Contempt R., p. 65) that the stylus cuts and wears down the edges of the surface of the record is very misleading and inaccurate, and shows that the point of a properly formed needle, such as those used by the complainant, is specially ground and shaped so as not to cut the record. (Contempt Rec., p. 27.)

He also shows that the statement of Edward F. Leeds, in his affidavit of November 28th, 1906, to the effect that a record can only be played 25 or 30 times, (Contempt R., p. 38) is most inaccurate, if it refers to complainants' records. (Contempt Rec., p. 26.)

The fact that the defendant may manufacture and sell disc records for use in the combination of the patent which *are of inferior material*, and wear appreci-

ably after a few reproductions, has nothing to do with the proposition here involved.

The fact is that complainants' records are of hard, durable material and will last almost indefinitely without appreciable wear.

It must be borne in mind also as frequently pointed out and admitted by defendant, that the complainant usually sells with its machines a number of its records, not one record, and that as shown by the affidavit of Mr. Middleton (Contempt Record, p. 22), *the owner of one of complainants' reproducers expends very much less for his machine than he does for his collection of records purchased from the complaniant;* that while $25 may represent the price of the machine, the owner of that machine in a short space of time will expend as much as $100 for records, or four times as much for records as for the machine. Mr. Middleton here shows that the revenue, therefore, to the Victor Talking Machine Company from records forming a material element of the combination in suit, is frequently very much larger than the revenue from the reproducer alone.

THE PATENT DESCRIBES HARD DURABLE RECORDS.

As shown by the Berliner Patent No. 534,543, (Inj. Rec., p. 452) *in suit, it was intended that these Berliner records, or "traveling tablet having a sound record formed thereon," should be, and were described to be, of hard, durable material.*

The specific record referred to in the patent in suit, No. 534,543, from which the sound was reproduced in the combination of the reproducing apparatus of claim thirty-five, was a zinc disc with a laterally undulating record of even depth etched therein. This record, and the particular method of making it, is de-

scribed on pages 4 and 5 (Inj. Rec., pp. 459 and 460) of the patent No. 534,543, in suit. It states (page 4, line 14, etc.), "a record tablet prepared in the manner described in my aforesaid Letters Patent, is then placed upon the tablet 4 and clamped to the same as hereinbefore described—" The before described Letters Patent referred to are the Berliner record patent No. 382,790, of May 15th, 1888, referred to on page 1, line 15, of the specification.

This patent No. 382,790, (Inj. Rec., p. 434) was for the process of producing these sound records, which patent states on page 1, line 19, etc.:

> "My present invention is an improvement upon that described in my aforesaid patent; (an earlier patent of Berliner, No. 372,786, Inj. Rec., p. 416) and it has for its object the production of a record of sound-waves in solid, resisting material, principally metal, by the process of direct etching; whereby a solid unchangeable sound-record is obtained more cheaply and more readily—"

This Berliner patent No. 382,790, also states, page two, line thirty-one, etc.:

> "From a record produced in the manner described any number of copies may be obtained by electro-deposition, especially if the original record is etched in metal. In that case, however, I have found it is advisable to burnish the original record groove before the plate or cylinder is placed into the depositing bath. This is a very simple process, and consists in holding and gently pressing a pointed burnishing tool in the record groove while the plate or cylinder is rotated."

It is thus seen from the specification of the patent in suit, No. 534,543, and from the Berliner Patent No. 382,790, referred to in the patent in suit, that the "traveling tablet having a sound record formed there-

on," or record disc, of claim thirty-five, was intended to be *a durable, substantial record,* and was and is such.

By reference also to the Berliner patent No. 548,623, the record claims of which were adjudicated by Judge Hazel in Victor Co. *v.* American Graphophone Co., (140 Fed. Rep., 860) to be confined to hard rubber, it is seen that Mr. Berliner always contemplated that these records, with the laterally undulating groove of even depth, should be made in *hard, durable material.* These records were what are called duplicate records, being pressed from a matrix of the original record in this hard rubber like material. While these record claims of the Berliner patent No. 548,623, specify hard rubber, the specification in referring to other materials which could be employed, referred only to hard, durable materials, among others celluloid.

If the complainant had sold wax disc records of the zig-zag type, the defendant would have more ground for its contention that the complainants' records were perishable and temporary.

MR. KENNEDY'S TESTIMONY AS TO DURABILITY OF COMPLAINANTS' RECORDS.

In this present suit, on the motion for preliminary injunction, Mr. Kennedy, complainants' expert, states (Injunction Record, p. 60, fol. 178), in reference to the record exhibits in this case, that the record discs are "*made of hard indestructible material,* in the faces of which are impressed a spiral record groove of even depth with lateral undulations." Mr. Kennedy also shows that the record exhibits in the case of Victor Talking Machine Co. *v.* American Graphophone Co. (140 Fed. Rep. 860), affirmed by the Court of Appeals for the Second Circuit (145 Fed. Rep. 350), were also

made "of hard material having in its face a spiral groove of even depth with lateral undulations."

The affidavit of Albert C. Middleton on behalf of complainants in the injunction proceeding in this present suit (Injunction Record, p. 51, fol. 153), states that "Complainants' Exhibit, Complainants' Sound Record, is a flat disc of *indestructible material,* in the face of which is a spiral groove of even depth having lateral undulations representing the sounds to be reproduced."

Judge Hazel in rendering the decision in Victor Co. *et al., v.* American Graphophone Co., 140 Fed. Rep. 860, (Injunction Record, p. 67, fols. 198-199), showed that Berliner's process of recording and reproducing, such for instance as described in the Berliner patent No. 564,586, (Inj. Rec., p. 465) differed essentially from the phonograph and graphophone, and states:

> "The specification described a process by which the sounds were inscribed upon a layer of non-resisting material; which was afterward copied in *non-yielding material,* from which the sounds were reproduced."

THE TESTIMONY BEFORE THE COURTS BELOW IN THE AMERICAN GRAPHOPHONE CASE RE DURABILITY OF THE RECORDS.

As shown by Mr. Kennedy's affidavit in this case (Inj. Rec., p. 60, fols. 178 and 181), the Complainants' Exhibit, Complainants' Sound Record in the case at bar, and the complainants' and defendant's sound records in the suit against the American Graphophone Company, cited by the Court of Appeals for the Second Circuit, (145 Fed. Rep. 350), are the same, and made of ***hard, indestructible material.***

In the said American Graphophone case, the evidence of Joseph Lyons, which was before the Court in

that case, showed that the complainants' sound records were made in hard, resisting material. He also showed, (Transcript of Record, p. 19, American Graphophone case which is submitted to this Court) that Mr, Berliner deviated from prior processes, and, among other things, formed the record in hard, resisting material.

On page 27, (Transcript of Record American Graphophone case) Mr. Lyons, shows that the record tablet exhibit in the American Graphophone case is "a record tablet consisting of a flat disc of hard, resisting material. * * * This sound record tablet is a circular disc of hard, black material, which has in its upper face a laterally undulating spiral groove of even depth."

Mr. Lyons shows, (on pp. 27, 29 of Transcript of Record, American Graphophone case) that the complainants' records and defendant's records are exactly the same.

Mr. Lyons also states, in referring to Mr. Berliner's invention (XQ. 13, p. 34, Transcript of Record, American Graphophone case), that Mr. Berliner started with a Scott Phonautogram, and his first proposal was to reproduce that in hard material by process of photo-engravings.

In the case of Victor Talking Machine Co. *v.* American Graphophone Company, suit on Berliner hard rubber record patent, No. 548,623 (145 Fed. Rep. 189, referred to in Mr. Hick's affidavit, Contempt Record, p. 70), recently affirmed by the Court of Appeals for the Second Circuit, the Court said, as to the exhibit records:

> "The sound records which were claimed to infringe complainants' records were manufactures of shellac and heavy earthy material covered with lamp black. In appearance they were similar to the sound records in suit. The substances used by the defendant in the manufacture of sound records are claimed by complainants to be the equivalent of hard rubber."

The Court of Appeals for the Second Circuit, in the decision of Judge Townsend, (151 Fed. Rep. 601) affirming Judge Hazel, in this connection said, referring to defendant's records:

> "Defendant's material, which is a manufacture of earth and shellac, is similar to the hard rubber of the claims in the fact that it is impressible when soft and *hardens when cold.*"

The testimony of Mr. Lyons in the American Graphophone Case, in referring to the defendant's disc record, said:

> "The material is not only hard, so hard as to exclude the possibility of cutting the sound grooves into it—."

Mr. Lyons was showing that the sound groove was pressed into the material while heated, which became hard upon cooling under pressure.

RE DEFENDANT'S AFFIDAVITS.

The affidavit of Edward F. Leeds is the only one which states that the material of which *complainants'* records have been made wore perceptibly in the reproduction of the sound.

The attention of this Honorable Court is particularly asked to the affidavits of the defendant upon which defendant's counsel bases his contention that the complainants' records are perishable and temporary. The defendant's counsel bases his contention upon three affidavits; one of Edward F. Leeds (Contempt Record, pp. 30 to 40; Defendant's Brief, accompanying the Petition for Writ of *Certiorari*, p. 18); the affidavit of Lewis H. Bunker (Contempt Record, pp. 60 to 62; Defendant's Brief, accompanying the Petition for Writ of *Certiorari*, p. 21); and the affidavit of Mr. Leo. Moeller

(Contempt Record, pp. 65 to 67; Defendant's Brief, accompanying the Petition for Writ of *Certiorari*, p. 21).

A careful reading of the portions of these affidavits, quoted in the Defendant's Brief, accompanying the Petition for Writ of *Certiorari* shows that Edward F. Leeds, the President of the Defendant Company, is the only witness who swears that *complainants'* sound records could be used only a very limited number of times for reproducing sound. This witness is the only witness who swears to this effect regarding *complainants'* sound record.

This is the only witness who swears that complainants' records, after a few playings, become gray in appearance, alleging that the friction of the needle has chipped off the edges, cut into the smooth finish of the surface, and otherwise wore out the material. This witness Leeds also makes the false and unwarranted statement that in complainants' records, the deterioration rapidly increases until soon the record is useless.

The worthlessness of this witness's statements is also illustrated by a further statement made (quoted on page 20 of Defendant's Brief accompanying the Petition for Writ of *Certiorari*), regarding the records of one of this complainants' competitors, the American Graphophone Company, wherein he says (Contempt Rec., p. 38, fol. 64):

> "Records made by complainants' licensees, the American Graphophone Company, ordinarily cannot successfully be reproduced more than twelve or fifteen times, and the same is true of similar records made by the American Record Company."

That this is untrue is apparent from the most casual examination of these records. These disc records of the American Graphophone Company have been

before the courts frequently, and were in evidence in the suit of the Victor Co. *v.* The American Graphophone Co.

The character and value of this affidavit may be judged from these statements.

This Court will observe in reading Mr. Leeds' affidavit, that while he states (Contempt Rec., p. 38) that certain disc records will wear out in 25 or 30 reproductions *unless made of proper material*, he also says that often a single reproduction, or two or three reproductions, will destroy a record by reason of the quality of the material, and that sometimes records become useless after being played ten or twelve times. *He does not make these statements against complainants' records.* He says (Contempt Rec., p. 38) that in exceptional cases the records can be played as often as 50 or 60 times. He does not here state that this is the limitation on complainants' records.

The attention of the Court is also called to his statement that it takes but a minute, or two, to play a record. (Contempt Rec., p. 38.) Therefore, according to his statement one of these records would be worn out in an hour, or at most two hours, if played continuously.

The fact is that these complainants' records are practically indestructible, and last well for years with ordinary care.

Of course, a record may break or become destroyed by accident, which is liable to happen to any patented construction. It is also true that a record may be destroyed by a sharp tool improperly used. A hatchet would be a very good thing for this purpose.

Another thing Mr. Leeds states against the record is, (Contempt Rec., p. 38) "Another reason why the record is intended to be but a temporary part of the machine is that after the record has been played several times *it becomes tiresome.*"

Mr. Leeds, however, (Defendant's Brief, accompanying the Petition for Writ of *Certiorari*, bottom of page 20), refers to the problem which complainant has solved. He states (Contempt Rec., p. 38, fol. 64):

> "Hence one of the problems in the record making art is to secure a material so perfect that it will withstand the friction of the needle a greater number of times."

The complainants, as shown by the affidavit of Mr. Middleton (Contempt Record, p. 27), have solved this problem of securing the best and most durable material.

Edward F. Leeds, President of the Defendant Company, in Contempt, in American Graphophone Co. v. Walcutt, et al.

Judge Wheeler, in the United States Circuit Court for the Southern District of New York, in which district the present suit was commenced, in the case of the American Graphophone Co. *v.* Walcutt, *et al.*, 86 Fed. Rep., p. 408, held Cleveland Walcutt and Edward F. Leeds in contempt for violating the injunction order of that Court, in that case restraining Walcutt, *et al.*, from infringing the Bell and Tainter Patent, No. 341,214, and the Tainter Patent, No. 341,288, by making and selling cylindrical talking machine records.

The defendants committed the acts in contempt as officers of a corporation organized while the original case was under advisement, but the court held that that did not make their acts any less a violation of the injunction. In the contempt proceedings in that case, Edward F. Leeds, now the President of the Leeds & Catlin Co., and Cleveland Walcutt, contended that because they bought a licensed recording machine they had a right to duplicate a record made on this recording machine which duplicated records were made in

accordance with the claims of the patents which they were enjoined from infringing. The court held them guilty of contempt.

Re Affidavit of Louis H. Bunker.

(Contempt Record, p. 60; Defendant's Brief accompanying the Petition for Writ of *Certiorari*, p. 21.)

It will be noted that this portion of Mr. Bunker's affidavit quoted in Defendant's Brief is the only portion which refers to the question of durability of sound records, and that *nowhere in his affidavit is any reference made to complanants' records.* The statement of Mr. Bunker is a general statement, and nowhere specifies the character, or durability, of *complainants'* records. Mr. Bunker states, (Contempt Rec., p. 61), "Often from 10 to 15 reproductions will wear out and destroy the record." *He does not say that this is true of complainants' record;* it is possible that some records might be so constructed in conjunction with some machine as to wear out and become useless in that time, especially if it was intended for the purpose of wearing out.

The character and value of Mr. Bunker's affidavit may be judged from the statement, "it is the practice to replace the record after one or two playings." (Contempt Rec., p. 61.)

If Mr. Bunker means by this that the custom is to change the record for the purpose of hearing another selection after one or two reproductions, he may be right, but it is hoped that the Court will not be misled by this statement.

If he means that the records are usually replaced after one, or two, playings, because they are worn out, of course, the statement is ridiculous.

Re Affidavit of Leo Moeller.

This affidavit is contained in the Contempt Record, p. 65 and the portion relating to the durability of a record quoted in Defendant's Brief, accompanying the Petition for Writ of *Certiorari*, p. 21. The portion quoted in Defendant's Brief is the only portion referring to the durability of the records. Like Mr. Bunker, this witness makes *only a general averment*, that flat disc records generally are of a temporary character, *without any specific reference to complainants' records.*

He says (Contempt Rec., p. 67), that the "lasting qualities of the flat disc sound records having lateral undulations depend upon the material of which the tablet is composed, and upon the perfection of manufacture of the record." This may be quite true, but his following statement is absolutely inconsistent when he says, "All such records are made substantially to-day of the same material." It is shown by defendant's other witnesses that the materials, at least as to their lasting qualities, vary very widely. *This witness, as before stated, does not specify complainants' records, and nowhere states anything regarding the durability of the material of which Complainants' records are made.* He thinks that a record might be destroyed the first time it is played.

He also states (Contempt Rec., p. 67) that it might be played thirty times, and that often ten or fifteen reproductions will destroy a record. He also states that records may be played from fifty to sixty times. (Contempt Rec., p. 67.)

As before noted, not one of defendant's affidavits, outside of Edward F. Leeds', makes any direct reference to complainants' records, and not one of defendant's affidavits, except Leeds', denies the complainants' proofs that complainants' records are made of hard, indestructible material, and may be reproduced, as many as 500 times without the average ear detecting

any material depreciation in tone. The attention of this Honorable Court is also called in this connection to the defendant's record label referred to on page 145 of this Brief, where defendant itself states: **"This record is made from the very finest material, and can be heard many times without deterioration."**

The durability, and practical indestructibility, of complainants' records was one of the features of this gramophone type of reproducing apparatus which particularly was called to public notice at the time they first came into use, as distinguished from the wax like records of the phonograph and graphophone.

USUALLY A NUMBER OF COMPLAINANTS' RECORDS ARE SOLD WITH COMPLAINANTS' REPRODUCER.

We have been considering the great durability and life of a single record. When, however, we take into consideration the fact, which is not denied by the defendant, and which is proven by complainants' affidavits, that each purchaser of complainants' reproducer usually buys with the reproducer a number of complainants' records for use in the combination of claim thirty-five, in carrying out the method of claim five, we find the durability and permanency of the combined apparatus increased in very large proportions.

Mr. Middleton says (Contempt Record, p. 22):

> "A purchaser of a machine or reproducing apparatus, for use in reproducing from the record, frequently expends very much less for the machine than he does for his collection of records, as records are being constantly purchased by the purchaser of a machine from time to time—".

Mr. Middleton also shows that while a purchaser may expend $25 for a reproducer, in a short space of time he will frequently expend at least $100 for records.

If the records cost $1.00 apiece, under these conditions the purchaser would have 100 records, and if each record, as Mr. Middleton testifies, (Contempt Rec., p. 27) is capable of at least 500 reproductions before even any deterioration in tone to the average ear, the purchaser would have complainants' patented apparatus capable of reproducing at least *fifty thousand reproductions* before any perceptible deterioration. A popular price of records is sixty cents, and some of them are sold at thirty-five cents. If sold at sixty cents the purchaser making an expenditure of $100 for records would have 166 records, capable of 83,000 reproductions before any appreciable deterioration. This would represent almost a lifetime as far as the durability of the records was concerned, as a user of a talking machine, while he may play it a great deal, does not play it all the time.

THE WEIGHT OF THE EVIDENCE

We see from the weight of the evidence that the complainants' records are made of practically indestructible material, and that even a single record is capable of almost indefinite use without any depreciation in tone to the average ear.

If there is no depreciation in tone to the average ear for 500 reproductions, *it follows that the same record may be used almost indefinitely for ordinary amusement purposes.* The purchaser of a dozen of complainants' records with complainants' reproducer, forming the combination of claim thirty-five, would have an extensive repertoire, lasting for several years, unless the records were abused, and abuse will destroy any device. Increase his repertoire by the additional purchase of complainants' records to 25, 50 or 100 and, as before stated, his records will last for an indefinite period.

There are very few patented combinations in the musical class which will give longer wear, and more durable results and satisfaction than this combined reproducing apparatus of claims five and thirty-five.

As stated by Judge Lacombe in deciding this Contempt proceeding (Contempt Record, p. 74), new records are "bought more frequently in order to increase the repertory of tunes than as substitutes for worn out discs."

RE ALLEGATIONS CONTAINED IN DEFENDANT'S AFFIDAVITS GENERALLY.—BRIEFLY REVIEWED.

Affidavit of Edward F. Leeds (Contempt Record, page 30, etc.).

Mr. Leeds shows, among other things, that he is the president of the defendant company, and that the right to sell sound records, independently of the reproducing apparatus, was not passed on in the prior suits; he says that the Leeds & Catlin Company never manufactured talking machines, but was exclusively a manufacturer of sound records. He says that the talking machines which the defendant sold prior to suit brought were some Talk-O-Phones which the defendant company had purchased from the Ohio Talking Machine Company. He shows in substance, that the defendant company is manufacturing only records now, which is the same business it was engaged in before the injunction. He alleges that the defendant discontinued *the use* of all sound reproducing machines, except "mechanical feed" machines, after the injunction. He says that on October 15, 1906, the defendant bought one hundred mechanical feed machines from the Talk-O-Phone Company, Contempt Record, page 31, which was three days after the decision of the Court of Appeals.

While Mr. Leeds, Contempt Record, p. 31 says that the defendant began to use and sell its sound records in connection with the feed device machines, there is nothing in the affidavit to show that the defendant ever sold such machine, or that any such machines are on the market. Whether he had seen such a machine, and may have owned such a machine is, of course, another question. Mr. Leeds does not deny that the records were sold over the counter since the injunction, similar to the records sold prior to the injunction, without inquiry as to how, or on what machine they were to be used except in a general way, nor does he deny that since the injunction sales were made to the purchasers set forth in the complainants' affidavits. He says that he was advised by counsel, Contempt Record, p. 31, that the "mechanical feed" machines were not an infringement. Mr. Leeds also states that the defendant had purchased necessary tools for the manufacture of "mechanical feed" devices similar to the Talk-O-Phone, Contempt Record, p. 32, and is now engaged in manufacturing such machines for use and sale, but does *not allege any definite sale*. Mr. Leeds also states that the Talk-O-Phones have been extensively advertised, and that he once saw a "mechanical feed" machine in the Imperial Hotel, in November, 1905. Contempt Record, p. 32.

He also shows that since the injunction the defendant has advertised its records in the New York Herald, of November 23, 1906, and in the Talking Machine World of November 15, 1906, Contempt Record, p. 32, and refers in said advertisements to some kind of a "mechanical feed" machine. The attention of this Honorable Court is directed to these advertisements, Contempt Rec., p. 58, as they are misleading, and are evidently gotten up for this purpose. In neither of these advertisements does the defendant state that these

machines *are on sale;* a reference to them is incorporated therein manifestly for the purposes of excusing its advertisements of its records.

Mr. Leeds also refers to a label which he says defendant had adopted "and is now putting upon its sound records, * * * stating that the record is sold for use on mechanical feed machines". Contempt Record, p. 32. The Contempt Records, produced by the complainants, did not have these labels thereon, and Mr. Leeds does not state that they have as yet been put upon the records, but does say; (Contempt Record, p. 32):

> "Very likely the employees of the Leeds & Catlin Company had not had sufficient time to put the annexed label upon said records—."

A considerable portion of Mr. Leeds' affidavit is devoted to his prior knowledge of graphophones, phonographs, and gramophones, and devices having mechanical feeds. Mr. Leeds also states Contempt Record, p. 34, that "The Valiquet Novelty Company, of 50 Columbia Street, Newark, New Jersey, is preparing to manufacture and sell disc talking machines employing disc sound records having lateral undulations and a mechanical feed device—." He does not, however, state that they are on the market.

While Mr. Leeds' affidavit denies the statements in certain of complainants' affidavits, to the effect that the disc sound records, such as defendant's disc sound records, can only be intended for use in combination with reproducing apparatus or machines, such as complainants', he does not point out, or testify, that there is any reproducing apparatus upon the market, or in general public use, upon which defendant's Contempt Records could be used. He makes a general statement that such disc sound records have been continuously used from a date prior to the invention of the patent in suit down

to the present time upon mechanical feed device machines, but he fails to specify where, or how, or how many of the same he has seen, or are on the market. It is a mere general statement, upon which no reliance can be placed, Contempt Record, p. 34. He also says that many of the defendant's records are sold for export, Contempt Record, p. 35, but that, of course, has nothing to do with those which are not sold for export.

He also claims that the sale of a reproducing apparatus by complainants implies a license to the purchaser to use infringing records. (Contempt Record, p. 36 and 37.) Mr. Leeds also claims that the records are perishable, and have to be renewed, and can only be used a comparatively limited number of times, as before considered. (Contempt Record, p. 38.)

Mr. Leeds, the president of the defendant company, admits that the defendant and its officers have been advised by counsel, Contempt Record, p. 39, "that it cannot sell sound records to be used to complete an infringing machine; and that it cannot do any act which, taken in connection with the act of another person, not acting under authority of the complainants, would constitute an infringing act."

As shown, the defendant company, and its president, have willfully violated this advice by selling records since the injunction, with the knowledge that they were to be used in an unlicensed manner, as hereinbefore pointed out.

Mr. Leeds makes reference to the date of "November 4th", Contempt Record, p. 39, of a letter referred to in the Platz affidavit. It is clear that this date should have been November 14th, which is the date of the letter containing the order referred to and not November 4th, a mere clerical error. The fact is that Platz ordered the goods, and they were sold to Platz as set forth in his affidavit.

The very facts of the case as shown by the proofs, make it appear clearly that the defendant was wilfully negligent in its acts relative to the injunction, and that the contempt sales were not inadvertent.

Re Affidavit of Louis H. Bunker (Contempt Record, pages 60, etc.).

A large part of Mr. Bunker's affidavit is devoted to trying to prove that he was the party who waited upon Messrs. Bennett and Thompson, at the time of purchase of the Contempt Records, referred to in Bunker's affidavit, and that he was not an employe, or servant, or official of the defendant company, and that what he said, therefore, did not bind the defendant; he attempts to show that the conversations with Bennett and Thompson were not correctly reported. A careful reading of this affidavit is requested, as we submit it very clearly illustrates some of the devices and designs of the defendant company in its efforts to free itself of contempt, after the contempt acts have been committed.

The facts set forth in the affidavit of Mr. Thompson, on the occasion of the joint visit of Thompson and Bennett to the defendant's store, relative to the purchase of the contempt Records, is fully corroborated by Mr. Bennett. It is submitted that Bunker's excuse that he was not an employe of the defendant company, though he undertook to act for it, relative to the sale of the goods in the defendant's store, is a very suggestive one. He admits (Contempt Record p. 60), that Bennett and Thompson did ask him whether the defendant's records could be used on machines of the manufacture of the Victor Talking Machine Company. Thompson testifies (Contempt Rec., p. 18), relative to this inquiry, that the salesman from whom he purchased the goods on the occasion referred to,

said that they could be used on such machines. Bennett also corroborates this, in his affidavit No. 2 (Contempt Rec., p. 19-20).

The Bunker affidavit also refers to an alleged understanding by some that a purchaser of a Victor Talking Machine, was at liberty to purchase infringing records. While Bunker also refers to the so-called "mechanical feed" devices, he nowhere testifies that such machines were or are on the market, or in general use.

Re Affidavit of Loring L. Leeds, generally (Contempt Record, pages 63, etc.).

Mr. L. L. Leeds states that he agrees with the statements made by Mr. E. F. Leeds, S. H. Bunker and Leo Moeller. He refers to the so-called "mechanical feed" machine of the Valiquet Novelty Co., stating that he is informed by officers of that Company, that they are prepared to manufacture, and sell, a "mechanical feed" device, though he makes no statement that such machines have been sold, or are on sale. He refers to the prior art, which is a matter that has been passed upon on the motion for preliminary injunction, and also refers to the facts that some of the defendant's records are sold for export. He, nowhere, states, however, that the so-called "mechanical feed" device is on the market, or on sale.

Re Affidavit of Leo Moeller (Contempt Record, pages 65, etc.).

Mr. Moeller shows that he is employed by the Leeds & Catlin Co., and states that flat disc records could be used on a "mechanical feed" device, and treats, somewhat at length, on recording machines for disc, and cylindrical records having a feed screw, and

also refers to the Edison and Bell & Tainter patents, which were in evidence, and were fully considered in the Graphophone case, and in the motion for preliminary injunction in this case, and in the Talk-O-Phone case. He says he has seen a "mechanical feed" device, but nowhere states that such a machine is upon the market, or in general use. He says further (Contempt Record, p. 66), that the Valiquet Novelty Co., has recently offered to manufacture these "mechanical feed" devices for the Leeds & Catlin Co. He also shows that some of the defendant's records are sold for export.

Mr. Moeller also attempts to show that the disc records wear out very easily, though he admits that their durability depends upon the material of which the record is composed, and upon the perfection of manufacture of the record (Contempt Rec., p. 67). It is well known that disc records made in proper material, such as the complainants', will stand, without appreciable wear, even a couple hundred of reproductions.

The affidavit of Mr. Moeller also refers to the contentions made in the other affidavits, that purchasers of complainants' licensed reproducing apparatus has a right to use infringing records.

Re Affidavit of Louis Hicks (Contempt Record, pages 68, etc.).

Mr. Hicks, who is counsel for the defendant, refers (Contempt Record, p. 68-69), to the infringement in the suit against the American Graphophone Co., and also to Judge Hazel's reference in his opinion, in that case, to the Bell & Tainter patent, which, we submit has no bearing upon the question now involved, as questions of alleged anticipation had been disposed of.

Mr. Hicks contends that the question of infringement, in the case of the American Graphophone suit, was confined to the making, using and selling of machines and sound records, and in this case was confined to the sale, by the defendant, of an unlicensed machine, with sound records for use thereon, and that the question of the sale of records alone was not adjudicated before.

While counsel for complainants, as stated by Mr. Hicks (Contempt Record, p. 69), did set forth in his brief on the motion for injunction, that he presumed "that the Court does not desire, without the benefit of a full discussion, to say, upon these motions, whether these so-called 'mechanical feed' machines are, or are not, mere attempted evasions of claims 5 and 35 of the patent in suit," yet, as herein pointed out, in another portion of this brief, the defendant's counsel, in the Court of Appeals, very fully presented an argument in his brief, similar to that which he now here presents, regarding the so-called "mechanical feed" machine, and the effect of selling records which might be used in connection with such a "mechanical feed" machine (see Defendant's Injunction Brief, accompanying Petition for Writ of *Certiorari*, p. 191-197).

Complainants' affidavits on the injunction motion shows that such "mechanical feed" machines were not upon the market, and reviews the question on pages 26-27; 71 and 79, of this Brief, quite fully.

Therefore, while the *construction* of the so-called "mechanical feed" device was not seriously considered by complainants in the motion for preliminary injunction, *the fact that it was not on the market,* or in general use, was proven by complainants' affidavits, and discussed in its brief and doubtless considered by the Court.

As hereinbefore stated, the so-called "mechanical

feed" device is believed to be a mere attempted evasion of the patent in suit, and would not affect the question in any way, but the question of whether it is, or is not an attempted evasion, need not be discussed here for the reason that it can play no part in these proceedings, as it is clearly shown that these machines are not upon the market, and not in use.

Mr. Hicks also refers to the alleged mechanical feed machine and the prior art, and states that he advised the Leeds & Catlin Co. (Contempt Record, p. 70), as set forth in the affidavit of Mr. E. F. Leeds. Advice of counsel, we submit, however, under the authorities, is no excuse for the violation of an injunction order, as herein elsewhere set forth.

Mr. Hicks also refers to a proposed form of order submitted by complainants' counsel (Contempt Record, p. 69), relative to the decree. The fact is, however, that there was no material difference in the order submitted and the order entered, as will be seen by comparison of the same.

Mr. Hicks also refers to the decision of Judge Hazel, in 145 Fed. Rep. 149, in the suit of these complainants against the American Graphophone Co., restricting the Berliner Duplicate Record Patent, No. 548,623, to hard rubber (Contempt Rec., p. 70). This, however, has nothing to do with the sustained claims in this case, as Mr. Berliner had long before invented his record and reproducing apparatus, the subject-matter of claims 5 and 35, of the patent, in suit, No. 534,543, which record then consisted of an etched, or photo-engraved disc, or plate, from which the reproductions were made. The subsequent invention for producing these duplicate records in hard rubber or like material, was an improvement, and of later date and therefore, cannot affect the breadth or scope of the claims in suit. The Jones Patent, No. 688,739, re-

ferred to by Mr. Hicks (Contempt Record, p. 70), of December 10, 1901, had nothing whatsoever to do with the scope of the claims in this suit.

Mr. Hicks, in his affidavit, admits that the Talk-O-Phone Company, the defendant in the other sister suit to this, manufactured the reproducing apparatus, while the Leeds & Catlin Co., were solely engaged in the manufacture and sale of records (Contempt Rec., p. 71). It is apparent, therefore, that the Leeds & Catlin Co., since the injunction, continued making and selling records exactly as it did before the injunction, as it had previously never sold but very few machines.

DEFENDANT TRIES ALSO TO EXCUSE ITS CONTEMPT ON THE GROUND THAT COMPLAINANTS DID NOT ATTACH TO THEIR REPRODUCING APPARATUS, INCLUDING THE RECORD, ANY RESTRICTION WHEN THEY SOLD THEM TO PURCHASERS.

Just why the defendant makes this contention is not apparent, as clearly, a patentee of a patented article, such as the combination claim 35, in selling the combination and the parts, is not, by law, obliged to place any such notice of restriction upon his goods. Anybody who makes, sells or uses the patented combination without a license is liable to infringement. The defendant's counsel seems to contend that when complainants sell one element of the combination—the reproducer—with the other element of the combination—the traveling tablet having a sound record formed thereon, or record—without placing a restriction upon the reproducer at the time of the sale, the purchaser has a right to buy from one who is not a licensee as many additional traveling tablets having the sound record formed thereon (forming a most essential ele-

ment of the combination), to be used continuously or at intervals, in lieu of the original record, or alternately with the original record, to produce additional selections, whether the original record, or records purchased are broken, or worn out, or if the purchaser becomes tired of that selection.

If defendant's proposition is true, the complainants will have lost the value of the combination, and the decisions of the courts sustaining the combination as patentable and valid will be practically nullified.

As shown by Mr. Middleton's affidavit (Con. Rec., p. 22), and Mr. Haddon's affidavit (Con. Rec., p. 24), the manufacture and sale of these disc records, forming a most essential element of the combination, is the most valuable portion of complainant's business.

NO INTENTION BY COMPLAINANT BY SALE OF REPRODUCER TO LICENSE ANY ONE TO MAKE AND SELL RECORDS FOR USE ON THE REPRODUCER.

Mr. Haddon's affidavit also states (Con. Rec., p. 24):

> "The Victor Talking Machine Company, by the sale of its reproducing apparatus, never licensed, or intended to license, the purchaser, or anyone else, to supply the traveling tablet or record, the other element of the combination of claim 35, for reproducing sound in accordance with the method of claim 5."

As hereinafter more particularly shown (pp. 90-91 of this brief) there can be no implied license to the purchaser of the reproducing portion of the combination to buy or use infringing records, among other reasons, as complainants' reproducer is sold at a separate price, independent of the price of the complainants' records,

and complainants' records are sold at a price independent and distinct from the price of the reproducer.

When, therefore, the complainant sells a reproducer at a price distinct from the price of the record, *the purchaser is only paying for a portion of the patented combination. The profit for the reproducing element is only a portion of the complainants' profit for the patented combination,* and, therefore, by paying the price only of a portion of the combination, *the purchaser could not acquire a right to the whole combination,* and the whole combination is not, by a sale of a portion of the combination, relieved from the monopoly. Especially is this true in this particular case, where the complainant manufactures and sells, and stands ready to supply the other element of the combination, which is a large part of its business, and so advertises its readiness to the world, at large expense in monthly catalogues, newspapers, magazines, etc. (See Haddon affidavit, Con. Rec., pp. 22-24; Middleton affidavit, Con. Rec., pp. 20-22.)

Defendant also contends that as the disc records are not separately patented, but only patented in the combination with the reproducer, it is entitled to make and sell records for use in the patented combination. This is substantially the illogical contention set out in Defendant's Brief accompanying Petition for Writ of *Certiorari,* p. 28, etc.

The defendant also here substantially contends that because the complainants, or their licensees, have sold these disc records to the public without special restrictions contained thereon, the sale of this record, being one element of the combination, releases the combination from the monopoly of the patent.

In other words, the defendant in effect contends that the sale of a record, one element of the combination, without any restriction being placed thereon,

implies the right to the purchaser to make, or have made for him, by one who is not a licensee, the other element of the combination, the reproducer. This was expressly decided in American Graphophone Co. *v.* Amet (74 Fed. Rep. 789), where Judge Grosscup decided that the sale of a graphophone record did not imply a license to the purchaser to make a reproducer.

Defendant's counsel also contends, Defendant's Brief accompanying Petition for Writ of *Certiorari*, p. 29, that disc sound records, having laterally undulating grooves of even depth, belong, to the prior art.

This contention is not supported by the evidence; but even if it were, it would make no difference in this case, as the patented thing is the *new combination*, and the *new method or process.*

Defendant's counsel seems to base his contention, in this respect, on certain expired Berliner foreign patents, all of which have been considered in the Injunction proceedings in this case, and also on an Edison Patent, No. 1644 of 1878, and Bell & Tainter Patent, No. 341,214, all of which were thoroughly considered and passed upon in the Graphophone case, as well as in the Injunction proceedings in this case.

These questions were decided in Victor Company *v.* American Graphophone Company (140 Fed. Rep., 860, Inj. Rec., 63, and 145 Fed. Rep. 350; Inj. Rec., 73) and in American Graphophone Company *v.* Leeds (87 Fed. Rep. 873), Judge Shipman regarded the devices described in this Edison Patent as mere suggestions, and having no anticipatory effect.

RE SO-CALLED "MECHANICAL FEED" DEVICES.

The Defendant's Brief accompanying Petition for Writ of *Certiorari* (p. 31, etc.) endeavors to make it

appear that so-called "mechanical feed" devices, for reproducing sound from flat disc records, have been known for a number of years past.

As shown by the proofs the only mechanical feed reproducing machines in commercial use at the time of the suit and at the time of the Contempt proceedings, are the mandrel type of machine, of the phonograph and graphophone, for reproducing from cylindrical records.

The fact that Mr. Berliner, in his patent, No. 564,586, may have stated that that flat disc record recorded on the recording machine shown in Figure 1 of that patent, (Inj. Rec., p. 463) could be reproduced upon it, in no manner affects the situation in this case.

The only question here involved, in this connection, would be whether, at the time of the Contempt proceedings, mechanical feed machines were upon the market, and in common general use, upon which defendant's contempt records could be used, for reproducing, and that in the sales of the said contempt records the intent was that they should be so used on said so-called "mechanical feed" machines, and that they were sold for this purpose. There is, however, absolutely no evidence in this case that any such mechanical feed machines were in use and on the market, or, in fact, ever had been. Complainants' affidavits show conclusively that there were not. *There is no evidence of any records sold by the defendant to owners of such machines.*

Attention is called to the defendant's affidavits, especially that of Edward F. Leeds (Con. Rec., p. 31, etc.) and quoted in Defendant's Brief accompany Petition for Writ of *Certiorari* (pp. 32, 33), where it will be noted that while Mr. Leeds tries to create the impression that such so-called "mechanical feed" machines were sold, and in general use, he nowhere states

that the one hundred machines which the Leeds & Catlin Company are said to have purchaser from the Talk-O-Phone Company, in October, 1906, or any other such machines were ever sold by the defendant. They evidently remained in the possession of the defendant, and *there is no evidence of any sale of any such machines,* or their use, other than the statement of Mr. Leeds, to the effect that the defendant took over from the Talk-O-Phone Company (which was enjoined in the sister suit in this case), one hundred so-called mechanical feed device machines.

The affidavits of Mr. Middleton (Con. Rec., p. 21), and Mr. Haddon (Con. Rec., p. 23, etc.), show that the complainants' apparatus is the only one upon the market for reproducing sound from a record similar to the contempt records.

We submit that defendant's contention relative to the so-called mechanical feed machine is illogical and unfounded, and is merely devised for the purpose of trying to evade the decree, among others, for the following reasons:

(1) That this question was raised in the Circuit Court upon the argument of the motion for preliminary injunction before Judge Townsend, and the injunction granted nevertheless.

(2) That this question was raised on the appeal to the U. S. Circuit Court of Appeals specially in Defendant's Injunction Brief accompanying Petition for Writ of *Certiorari,* under Points Fourteen and Fifteen (pp. 191 to 198) and not deemed worthy of consideration by the Court, for the decree of the Court below was affirmed.

(3) That the so-called "mechanical feed" device of the defendant at best is a mere subterfuge, is a mere attempt to evade claims five and thirty-five; that it

does not evade them; that the merits claimed for it are spurious; that the device would work better without the so-called "mechanical feed" than with it, and that it infringes the claims.

(4) That the Contempt Records are exactly the same records in construction and operation as the infringing records sold by the defendant before the injunction, and that the question of whether such a record, if used on such so-called "mechanical feed" machine, would infringe the combination of claim thirty-five, or the method of claim five, is a question which is irrelevant to this contempt proceeding, as it was before the court in the injunction proceedings.

(5) That the so-called "mechanical feed" machines are not commercially upon the market, as shown by the complainants' affidavits, and even if a few such machines had been sold by the defendant since the injunction, or had been placed on sale at a few stores since the injunction (which we deny) this fact would not relieve the defendant from the effect of the injunction, restraining it from selling the apparatus and devices of claims five and thirty-five of the patent, such as the traveling tablet or record, for use in combination with the reproducing apparatus. The defendant in the injunction proceedings produced no evidence to show that the so-called "mechanical feed" machine was on the market—prior to or subsequent to the injunction; and they were not. The general sale by the defendant of its records after the injunction would, of course, be contempt.

(6) That the complainants' proofs show that the defendant, since the injunction, sold records to Thomas W. Luck, (Contempt Rec., p. 10); Charles M. Hemenover, (Contempt Rec., p. 12), and Charles K. Bennett, (Bennett affidavit No. 2), (Contempt Rec., p. 19) with-

out making any inquiry as to how, or in connection with what reproducing apparatus, the said records were to be used, and sold the same with the knowledge that the only reproducing apparatus in general use, amounting to hundreds of thousands of machines, was that constructed and operated in accordance with the claims of the patent in suit, and which could only be legitimately operated when in combination with complainants' records, forming the other element of the combination, and then only when the reproducing apparatus was manufactured by the complainants or its licensees. To assume that the defendants were excused from inquiry, or presume that they were to be otherwise used because the defendant claims it may have had a few so-called "mechanical feed" machines upon the market, sold since the injunction which we deny, is puerile and unworthy of consideration.

(7) The affidavits of Albert Platz, (Contempt Rec., p. 13); George M. Thompson, (Contempt Rec., p. 18), and Bennett affidavit No. 1, (Contempt Rec., p. 17) show that the defendant, since the injunction, sold, in the ordinary course of business, infringing records to these parties, with the knowledge, specially brought to the defendant's attention, that the purchasers had Victor reproducing apparatus, of the Victor Talking Machine Company, and in the case of the purchases of Thompson and Bennett, (Contempt Rec., p. 19), (Bennett affidavit No. 2), the defendant's representative told the purchasers that the defendant's records sold could be used on a Victor reproducing apparatus or machine. In the case of Albert Platz, (Contempt Rec., p. 13) they were sold to him with the knowledge that he was a dealer exclusively in Victor talking machines, and dealt in no other machines.

This Very Question was Fully Before the Circuit Court and the Appeal Court Upon the Injunction Proceedings.

The argument was presented in the Circuit Court and in the Court of Appeals by the defendant, that the Leeds & Catlin records could be used on the so-called "mechanical feed" machine, and therefore did not infringe. The device and the machine were illustrated in a cut accompanying Mr. Irish's affidavit (Injunction Record, p. 291), and described among other places in Irish's affidavit (p. 286, fols. 857-8—Hick's Aff. Inj. Rec., p. 96-97, fol. 286; Ensign Aff. Inj. Rec., p. 111-112, fols. 333-336, p. 114—fol. 342. Leeds' Aff. Inj. Rec., p. 293, fol. 878, p. 295, fol. 883).

We would call the Court's attention particularly to the argument of defendant's counsel in the injunction proceedings under Point Fourteen, Defendant's In-Junction Brief accompanying Petition for Writ of *Certiorari*, p. 191, etc., where he states, *inter alia*, referring to the records (p. 191):

> "Such records are capable of use with machines of various constructions. The proposition that the making and selling of such sound records can be an infringement of the patent in suit is untenable."

Defendant's counsel also states (Injunction Brief accompanying Petition for Writ of *Certiorari*, p. 191):

> "The threatening circular letter of complainant company (Inj. Rec., p. 211, fols. 632-633) and of complainants' counsel (Inj. Rec., pp. 212-213) indicate that it is complainants' contention, and that it is complainants' purpose to state to the trade, that all disc sound records are infringements of claims five and thirty-five of the patent in suit. In view of the great injury which has been caused to defendants by reason of complainants' threatening letters to the trade, and because the

contention is entirely without foundation, it becomes important, especially for the Leeds & Catlin Company, that this point be passed upon by the Court, should the Court for any reason hold that the patent has not expired, and that claims five and thirty-five are entitled to a construction broad enough to cover defendant's machines."

Defendant's counsel also states (Injunction Brief accompanying Petition for Writ of *Certiorari*, p. 194):

"Under the following point, it will be shown that the talk-o-phones operating with the aid of mechanical feed devices cannot possibly be construed as infringements of claims five and thirty-five of the patent in suit and that such talk-o-phones are likewise adapted for use with disc sound records having lateral undulations."

Defendant's counsel also states in this connection (Injunction Brief accompanying Petition for Writ of *Certiorari*, p. 194):

"In the affidavit of Leeds (Inj. Rec., pp. 293-296), it is fully shown that the contention of the moving affidavits that disc sound records having lateral undulations can be used only on machines made according to claims five and thirty-five of the patent in suit is untrue and that the contention of the moving affidavits that machines made according to claims five and thirty-five can be used only with disc sound records having lateral undulations is likewise untrue. Mr. Leeds points out the different kinds of records and talking machines that have been made and put upon the market and are upon the market to-day and shows that disc sound records having lateral undulations existed long prior to the date of the invention of the patent in suit, and that Berliner himself secured patents covering disc sound records and machines for reproducing sound from the same, and that all of Berliner's said patents have expired. To the same effect in the affidavit of Mr. Irish (Inj. Rec., pp. 285-288, fols. 853-862), and the affidavit of Mr. Ensign (Inj. Rec., p. 114).

The affidavit of Mr. Leeds, referred to in defendant's above quoted argument (Injunction Record, p. 293 to 296), states on page 293:

> "The Talk-O-Phones Exhibits A and B are such machines which are constructed according to the feed mechanism of the early prior patents and not according to the alleged invention of claims five and thirty-five of the patent in suit."

These so-called mechanical feed machines, marked "Exhibits A and B" were those produced by the defendant on the motion for preliminary injunction. In Mr. Leeds' attempt to show that such machines were in commercial use, he states, on p. 295 of the Injunction Record:

> "On November 2, 1905, at the Imperial Hotel in New York City, I saw the Talk-O-Phone such as Exhibit A, with a mechanical feed device in successful and perfect operation with records of different makes and I know that such machines have been extensively advertised for sale by the Talk-O-Phone Company."

It will be noted, however, that there is no evidence of a sale.

The defendant's counsel, on page 196 of his Appeal Brief, injunction proceedings, copy of which is attached to the Petition for Writ of *Certiorari* in the injunction proceedings, refers to the construction of this so-called "mechanical feed" machine, and states:

> "The construction and operation of the talk-o-phones with mechanical feed devices are described in defendant's affidavits (aff. Hicks, Inj. Rec., pp. 96-97; aff. Ensign, Inj. Rec., pp. 111-112, fols. 333, 336, p. 114, fol. 342; aff. Irish, Inj. Rec., p. 286, fols. 857-858; aff. Leeds, Inj. Rec., p. 293, fol. 878, p. 295, fol. 883). A copy of the description and claims upon an application for a patent therefor on behalf of the Talk-O-Phone Company is one of defendant's exhibits (Inj. Rec., p. 275). And

the machines, Exhibits A and B, show the talk-o-phones with the mechanical feed devices, which, as Mr. Irish states in his affidavit, have been advertised by the Talk-O-Phone Company at an expense of from $22,000 to $23,000."

As pointed out in Complainants' Appeal Brief in the appeal to the Court of Appeals in the injunction proceedings (p. 191), a copy of which accompanies complainants' brief in opposition to the granting of the writ of *certiorari* in said injunction proceedings this so-called mechanical feed machine has only been advertised since the first decision of Judge Hazel (September 28, 1905), sustaining claims five and thirty-five in the case against the American Graphophone Company, and the application for the patent for this so-called "mechanical feed" machine, referred to in Mr. Hick's affidavit for the defendant in the preliminary injunction proceedings (Injunction Record, p. 96, fol. 287) evidently was filed since that date, as Mr. Hicks there states that the first action of the Patent Office on the said application as dated March 8, 1906.

In considering the question of this so-called "Mechanical feed" machine in the injunction proceedings, complainants' counsel states (Appeal Brief, p. 192, a copy of which accompanies complainants' brief in opposition to the granting of the petition for *certiorari* in said injunction proceedings):

> "Manifestly, this alleged 'mechanical feed' device, however, is nothing but an attempt at evasion of claims five and thirty-five of complainants' patent in suit, and the mechanical feed has no useful function to perform. The device will operate better without it than with it.
>
> "The mere fact that the defendants have evidently gone to so much trouble and expense in devising the so-called 'mechanical feed' machine, is strong evidence of their weakness in the defense of the machines in the present motions. If they had

substantial belief in the defences which they now present upon these motions, they would have no need of resorting to such means as devising a way out through the assistance of the so-called 'mechanical feed' machine.

"It is obvious that the object of the getting up of this machine by the Talk-O-Phone Company, outside of any stock selling scheme, was to get away itself from the infringement of claims five and thirty-five of the patent in suit, which it manifestly believed were valid, and also to furnish an excuse to record manufacturers, such as Leeds & Catlin Company for making disc records, so that the Leeds & Catlin Company could argue that their records were intended for use on the so-called 'mechanical feed' machine, and, therefore, did not infringe the patent either by contributory infringement, or otherwise.

"This plan of the Talk-O-Phone Company, which was not materialized, as none of these 'mechanical feed' machines have been placed upon the market, is an obvious one, and, we submit, should be signally discountenanced by this Court.

"The fact is, as shown by complainants' proofs before referred to, that outside of the complainants' machine, there is no talking machine upon the market with which such records as manufactured by the Leeds & Catlin Company could be used, except the infringing machines."

The Court of Appeals, therefore, as well as the Circuit Court, had before it this question of the alleged mechanical feed device, in the injunction proceedings, and it has no place now in contempt proceedings. (See also p. 29 of this brief.)

RE DEFENDANT'S CONTENTION THAT IT HAS A RIGHT TO MANUFACTURE AND SELL DISC RECORDS FOR EXPORT TO FOREIGN COUNTRIES.

It is not seen how the decision on this point, one way or the other, affects the action of the defendant in selling records at its store in New York City, just as it had done before the issuance of the injunction, without inquiry as to how they were to be used, and with full knowledge that thousands of infringing reproducing apparatus had been sold, and were in use, which infringing reproducing device the defendant itself had sold, and also with full knowledge that these records were to be used and could only be used in the combination of the claims of the patent in suit.

The statement by defendant's counsel that there is no evidence to show that the defendant has assisted in any infringement, is unfounded for there can be no clearer evidence of infringement than, as above pointed out, that the defendant continued, without any change whatever, in the sale of records, *the same as it sold before the injunction*, and which it was enjoined from making, using or selling. The sale of these records at defendant's store, without any inquiry as to whether they were to be used on any one of the thousands of infringing machines that have been sold, some of which the defendant itself sold, *and also with full knowledge in other instances that they were to be used on machines of camplainants' manufacture*, is we submit conclusive evidence that these records so sold since the injunction were to assist in an infringement, and in violation of the injunction.

As before stated, the points in the order as set forth in defendant's said brief in the court below (a copy of which is attached to the petition for *certiorari* herein), will now be considered point by point.

RE DEFENDANT'S POINT ONE.

Defendant contends that the sound record is a perishable temporary element of the combination, and that, under the case of Morgan Envelope Co. v. *Albany Paper Co., referred to, the purchaser of complainants' combination of claim thirty-five has the right to replace the record, and any manufacturer has the right to make and sell to said purchasers such records for the purpose.*

This point is manifestly the main point of defendant's variously stated defences, and is contained on page 42 of the Defendant's Brief accompanying the Petition for Writ of *Certiorari* in these Contempt Proceedings.

The defendant's counsel appears to hinge his whole case pretty much upon the decision in the case of Morgan Envelope Co. *v.* Albany Paper Co., decided by Judge Wallace in 40 Fed. Rep. 577, and by the U. S. Supreme Court in 152 U. S. 425.

Judge Lacombe, finding the defendant in contempt (Con. Rec., p. 74), decided that the disc records of the present case were "wholly unlike the toilet paper in Morgan Envelope case (which was destroyed by single use)", and the substitution of the new record could not be "in any legitimate sense 'repairs' (see Davis Electrical Works *v.* El. Light Co., 60 Fed. Rep. 276)."

The position of the complainants in the present suit is not that they dispute, in any way, the law, as laid down in the Morgan Envelope Co. case, as applicable to the facts in that case, but that they contend, most strenuously, that the facts of the present case are absolutely different from those in the Morgan Envelope Co. case, and that the decision in the Morgan Envelope Co. case was never intended to be so sweeping and far reaching as to include the practically indestructible record disc of the combination of claim thirty-five.

As hereinbefore shown, the defendant has founded his defences upon a false premise, viz.—that the complainants' record is a perishable, temporary element, which the facts do not, and cannot, warrant.

Further, that if the complainants' record would, in time, wear, it is manifestly not a perishable temporary part such as contemplated in Morgan Envelope Co. case, where the toilet paper was intended, and expected *to be consumed and destroyed by a single use.*

Therefore, the consideration of this Point One of the defendant is rather one of fact than law.

As before stated, the complainants' position is that the decisions in this Morgan Envelope Co. case were never intended to, and cannot apply, to such elements as the practically indestructible disc records of claim thirty-five.

The permanency and durability of these disc records, has hereinbefore been fully considered, and need not here again be reviewed.

The defendant's brief accompanying the petition for writ of *certiorari* herein (p. 43, etc.), endeavors, by repetition, to emphasize the alleged temporary character of *complainants'* sound records, which fact, however, as hereinbefore pointed out, has not been proven by the defendant's affidavits, Edward F. Leeds (Con. Rec., p. 38) being the only one who makes any specific averment of this character, while, on the other hand, as hereinbefore pointed out, complainants' affidavits of Mr. Middleton, (Inj. Rec., p. 51), and Mr. Kennedy, (Inj. Rec., pp. 60-61), in the Injunction proceedings, and of Mr .Middleton, in the Contempt proceeding, (Contempt Rec., p. 27), in addition to the other evidence hereinbefore referred to, show these records to be made of indestructible material, and capable of almost indefinite wear before any appreciable deterioration in tone to the average ear.

We will, therefore, consider somewhat briefly, these decisions in Morgan Envelope Co. *v.* Albany Paper Co.

RE MORGAN ENVELOPE CO. v. ALBANY PAPER CO. (40 FED. REP. 577 AND 152 U. S. 425).

In the reproducing apparatus of claim thirty-five, the reproducing stylus, mounted so as to be free to be vibrated and propelled by the record, is a very delicate acoustical device for reproducing sound in combination with the traveling tablet having a sound record formed thereon, in the method set forth in claim five.

The traveling tablet has the sound record formed thereon in a continuous spiral groove of even depth, with the sound undulations in the side walls of the groove, and as heretofore shown,, is formed in hard, durable material. This traveling tablet is a very important piece of mechanism of the claim, which as the tablet revolves vibrates the reproducing stylus back and forth mechanically in a double cam-like action, at the same time mechanically propelling the reproducing stylus, by reason of the spiral of the record groove, from the periphery towards the centre in a substantially radial line. We see, therefore, that we have in this traveling tablet having the sound record formed thereon, a most important mechanical element of the combination, constructed to co-act mechanically with the reproducing stylus, the other element of the combination.

In this respect also it will be seen how very materially different this record element of the combination is from the toilet paper in the Morgan Envelope Company case, which was a *product* or material contained in a mechanically operated casing *to be fed out* by the mechanically operated casing *to be used up and consumed.* The toilet paper in the Morgan Envelope Company case, as held by Judge Wallace (40 Fed. Rep., 580), "*is one for temporary use only,*" which "*may be completely used up in a few days.*"

The toilet paper was akin to the wheat in the bins

connected with a patent milling machine, or the pulp in the vats connected with a patent paper-making machine, or the small blocks of chocolate in a patent nickle-in-the-slot vending machine, and such like cases where the material is designed *to be fed out to be used up.*

It is respectfully submitted that a careful reading of Judge Wallace's decision in the Circuit Court in this Morgan Envelope Company case will fail to disclose any statement of the law which would warrant such a construction as defendant's counsel has sought to place upon this decision of Judge Wallace, so as to make it apply to the disc sound records forming part of the combination of the claims in this suit.

Judge Wallace's decision was affirmed by the Supreme Court of the United States on appeal (152 U. S. 501), and we submit that a careful examination of the opinion delivered by Mr. Justice Brown fails to support any such construction or contention which defendant's counsel seeks to place upon it in this case. This Honorable Court stated, *inter alia:*

"The first defence raises the question whether when a machine is designed to manufacture, distribute or serve out to users a certain article, the article so dealt with can be said to be a part of the combination of which the machine itself is another part."

It is respectfully submitted that the attitude of the mind of this Honorable Court regarding this Morgan Envelope case is well illustrated in this connection by the reference which it makes to the log which is sawn in the saw mill; to the wheat which is ground in the rollers; to the pin which is produced by the patented machine; to the paper which is folded and delivered by the printing press.

The fact that the roll of paper in the claim in controversy in the Morgan Envelope Company case, while

included as an element of the combination, was a thing to be consumed which the machine fed out, was manifestly the underlying thought of the Court in very properly holding as it did, though this Honorable Court did not deem it necessary to decide positively this point, as the facts failed to sustain the charge of infringement. It also appears from the decision of the Supreme Court in that case, "that it had not been the practice of the plaintiff to sell its fixtures independently of its paper, and that they sold only to such parties as dealt in and used their paper."

The Supreme Court as well as the Court below, based the decision manifestly upon the theory that the paper was merely the material to be used up, that the fixture which distributed the paper was the real mechanical patentable combination, that the fixture which contained the paper having the knife and cutter therein with mechanism for severing the unwound portion, was the real substantial thing patented, and that the paper which was for consumable use was akin to the log to be sawn, or the wheat to be ground, or the paper to be folded and delivered in the printing press, etc., and that therefore, the fixture being the mechanical patentable feature or main part of the device, others had a right to supply the consumable paper for delivery from the fixture, in essentially the same way as the farmer would have the right to sell wheat to be ground in the patented mill, or logs to be sawn in the patented saw mill, or the manufacturer of book paper would have the right to sell the paper to be folded and delivered in the patented printing press. And this is conceding, as suggested by the Court, that the consumable paper formed a valid combination with the mechanical fixture.

This distinction made by both the Supreme Court and the Court below, regarding the consumable charac-

ter of the toilet paper was, of course, the distinction which caused the Court to decide as it did. This is evidenced, among other things, by the statement of the Supreme Court in considering the question of whether the sale of this consumable material—toilet paper—by an outside manufacturer to the user of the fixture, was an infringement, where it states:

> "We are of the opinion that it is not. There are doubtless many cases to the effect that the manufacture and sale of a single element of the combination, with intent that it shall be united to the other elements and so complete the combination, is an infringement. Saxe *v.* Hammond, Holmes 456; Wallace *v.* Holmes, 9 Blatch. 65; Barnes *v.* Straus, 9 Blatch. 553; Schneider *v.* Poultney, 21 Fed. Rep. 399——"

This Honorable Court then goes on to state:

> "But we think these cases have no application to one where the element made by the alleged infringer is an article of manufacture, perishable in its nature, which it is the object of the mechanism to deliver, and which must be renewed periodically, whenever the device is put to use."

The complainants' disc record forming part of the combination of claim thirty-five in the case at bar, manifestly comes under the above decisions cited in the opinion of the Supreme Court in the Morgan Envelope Company case. The complainants' record is not perishable in its nature in the sense in which the word "perishable" is used in the opinion, and further, it is a most essential mechanical element of the combination of claim thirty-five, as hereinbefore pointed out. Claim thirty-five has only two elements—the first is the traveling tablet having the sound record formed thereon with a laterally undulating groove, and, second, the reproducing stylus shaped for engagement with the record, and mounted so as to be free to be vibrated and pro-

pelled, the laterally undulating record groove in the traveling tablet operating to mechanically vibrate the end of the reproducing stylus back and forth in a double cam-like action, at the same time propelling the stylus point in a radial path from the periphery of the traveling tablet toward the centre.

It is almost impossible to understand how any one can logically argue that such a mechanism as complainants' traveling tablet having the sound record formed thereon, made in practically indestructible material can be likened to the sheets of toilet paper of the Morgan Envelope Company case, which are intended for consumption and use.

The Court likens again this paper for consumption and use to the log of the saw mill, if it were an element of the combination, and states:

> "This exhibits not only the impossibility of this construction of the patent, but the difficulty of treating the paper as an element of the combination at all."

From this last quotation it is manifest that this Honorable Court regarded the consumable paper as an improper element of a patentable combination.

The Supreme Court here further states:

> "In this view the distinction between repair and reconstruction becomes of no more value, *since the renewal of the paper is in a proper sense neither the one nor the other.*"

The Court then reviews the case of the Cotton Tie Co. *v.* Simmons, 106 U. S., 89, which is not a parallel case.

The Court further in referring to the toilet paper likens it to any product to be placed for delivery in a patented mechanism, and says:

> "The replacement is of a product which it is the object of the mecnanism to deliver."

The Court also refers to Wilson *v.* Simpson, 50 U. S., 109, where the thing to be replaced was the cutting knives of the planing machine, which, of course, from the character of the use, were constantly wearing out in the extremely hard usage which rotary knives are subjected to in being run at a tremendous velocity in planing boards of all kinds. This is based on the doctrine of repair of a minor part.

The major part of defendant's brief is interwoven with a consideration of this case of Morgan Envelope Co. *v.* The Albany Paper Co., and in an attempt to show that complainants' hard, durable records are to be likened unto the toilet paper designed for consumption and destruction in the Morgan Company case.

It would seem unnecessary to present any further argument upon this point.

Certain statements are made, however, in defendant's brief, which may be misleading, such as the statement in Defendant's Brief accompanying the Petition for *Certiorari*, p. 43, that complainants' records "may be worn out or broken or otherwise rendered unsatisfactory or useless within even the short space of an hour or a day. The record cannot be used in the sound reproducing apparatus for the reproduction of sound therefrom for any considerable number of times without the certain destruction of the record."

There is no reliable warrant in the proofs for this statement, unless it is the understanding that, of course, sound records, like practically all other patented things, may be destroyed and broken quite readily by improper use.

COMPLAINANTS' INTENTION RELATIVE TO THE RECORDS.

It is manifest from complainants' proofs that the complainants' intention in selling the reproducer and

records forming the two elements of the combination of claim thirty-five, to be used in accordance with claim five, was that the records should be durable and lasting. As shown by defendant's affidavits, some of complainants' records sold for as much as $5 apiece. These are records containing high-priced talent, the complainant frequently paying the talent for one selection as much as $1,000.

It is an unthinkable thing that complainant should attempt to sell, or that any purchaser would buy at the price of $5, a disc record which is as perishable as defendant contends that it is, and could only last a few reproductions.

Mr. Middleton's affidavit (Contempt Record, p. 22) shows that the purchaser frequently expends very much less for the machine than he does for his collection of records, and states that

> "records are being constantly purchased by the purchaser of a machine from time to time."

As stated by Judge Lacombe in his decision, the substitution of new records are **"more frequently in order to increase the repertory of tunes than as substitutes for worn out discs."** (Contempt Rec., p. 74.)

The complainants' contention as to the durability of the records and that they shall last, is also evidenced by complainants' affidavits on motion for preliminary injunction, particularly of Mr. Middleton and Mr. Kennedy, showing they are made, as hereinbefore set forth, of indestructible material (see Middleton affidavit, Injunction Record, p. 51; and Kennedy affidavit, Injunction Record, p. 60, where he states that these records are *"made of hard, indestructible material"*).

This contention is also evidenced by Mr. Middleton's affidavit (Contempt Record, p. 27), where he says that the material of complainant's record **"is of the**

best and most durable character known to us for this purpose.''

Complainants' intention that no implied license by the sale of the reproducer, one element of the combination, was granted to the purchaser to purchase or use or make the hard, indestructible record, the other element of the combination, is shown, among other places, by Mr. Haddon's affidavit (Contempt Record, p. 24), where he states:

> ''The Victor Talking Machine Company, by the sale of its reproducing apparatus, never licensed, or intended to license, the purchaser, or anyone else, to supply the traveling tablet or record, the other element of the combination of claim thirty-five, for reproducing sound in accordance with the method of claim five.''

Mr. Haddon also shows at the same portion of his affidavit the intention of the Victor Company was positively to supply the disc records—the other element of the combination—to be used in conjunction with the complainants' reproducer. He states:

> ''A large portion of the Victor Company's business has been, and is, in the manufacture and sale of disc records, for use in connection with the reproducing apparatus which it makes and sells, and a large proportion of its profit is derived therefrom. When it sells reproducing apparatus to a purchaser, which is part of the combination of claim thirty-five, it is to be used in combination with the other element of the claim, sold by complainants, the traveling tablet or record, which it also sells to the purchaser at a separate price, distinct from the price of the reproducing element. The profit from the reproducing element is only a portion of the complainants' profit, the other portion of which is derived from the sale of the traveling tablet or record. The complainant could not afford to sell the reproducing apparatus at the price which it does if it were not for the fact that

the balance of the profit is to be derived from the records manufactured and sold by the complainant."

If defendant's contention be true that an implied license is acquired by the sale of the reproducer to make and sell records, the converse would also be as logical that for complainants to sell records would imply a license to make a reproducer.

This above proposition should negative defendant's contention.

Defendant is manifestly attempting to seek an implied adjudication from this Court of the correlative theory that somebody else can make the other element of the combination, the reproducer apparatus, on the same theory that they are entitled to make and sell the sound records, and thus deprive the complainants of the benefit of the adjudication of the Circuit Court of Appeals in the Graphophone, Talk-O-Phone and Leeds & Catlin cases.

As hereinbefore shown, the complainants' sound records have no analogy to the cutter knives of the planing mill in Wilson *v.* Simpson, before cited, though defendant strenuously contends that they are the same.

In the combination of claim thirty-five it is not intended by the complainants that the records should be thrown away and put into disuse at short intervals, like the cutter knives. The cutter knives of Wilson *v.* Simpson, are more like the little removable needle points in complainants' reproducer, in that the little needle points wear out quite rapidly, and, as shown by the affidavit, are frequently replaced. The cutter knives of the rotary planing machine need constant sharpening from the rough usage given them, and consequently are constantly wearing down. They are more like the typewriter ribbon spools in the case of Wagner Typewriter Co. *v.* Webster Co., 144 Fed. Rep. 405, where the

Court held that while the spools were part of the combination, they were merely an *ordinary working part.* This case quite concisely sets forth the distinction, and holds that while an ordinary working part may be substituted on the doctrine of repair, a chief part of the combination, or a vital element thereof, cannot.

USERS OF COMPLAINANTS' REPRODUCER AS A RULE BUY NEW RECORDS TO INCREASE THEIR REPERTORY.

Purchasers of complainants' reproducer do not buy new records because those formerly purchased from the complainants are worn out and inoperative, but buy them to be added to their previous collection to increase their repertory, as decided by Judge Lacombe. (Contempt Rec., p. 74.) In this manner again the case at bar is to be distinguished from the repairing or replacing of the cutting knives in the planing machine of Wilson *v.* Simpson. In Wilson *v.* Simpson it was held that the purchaser of the planing machine in buying new knives "repairs the damage which may be done to it——"

The doctrine laid down in Wilson *v.* Simpson was actually based upon that of repair, which is an equitable one.

As before stated, the purchaser of complainants' machine could undoubtedly repair the motor used for rotating the traveling table, or other working parts, not a vital element of the patented combination.

Re Davis Electric Works v. Edison Electric Light Co., 60 Fed. Rep., 276 (U. S. C. C. A., First Circuit).

Judge Lacombe very properly referred to this case as one of the decisions in support of his finding; the defendant, however, (Brief accompanying the Petition

for *Certiorari,* p. 46), criticizes this case, basing his criticism on his statement that "the Carbon Filament is exactly like the Cotton Tie case, and rests upon the same principle, and has no analogy whatever to this case or to the case of the cutter knives or to the case of the toilet paper."

In the Davis Electrical Works case above referred to, it was held that the defendant infringed the Edison Incandescent Electric Lamp patent because he substituted in an old lamp the vital element of the combination, viz., the filament. The defendant bought old lamps, made a hole in the bulb, put in a new filament, exhausted the air and closed the hole.

The claim is as follows:

> "(2) The combination of carbon filaments with a receiver made entirely of glass, and conductors passing through the glass, and from which receiver the air is exhausted, for the purpose set forth."

Defendant's counsel criticizes this reference because he holds that there were no temporary parts to be replaced "in accordance with the invention of the vendor." There were no temporary parts in claim thirty-five to be replaced within the intention of the vendor. Manifestly the carbon filament in the glass bulbs was of a more temporary and destructive nature than the complainants' sound record of the combination of claim thirty-five and was very much more perishable. The fact that complainants' sound record is removable from its connection with the reproducing stylus is not because the record wears out quickly at all, but because from the very nature of the invention **a repertory is required.**

It might as reasonably be argued that the purchaser of a *patented music box* of which the spiked *removable barrel* formed a part of the combination, in selling the music box with two or three extra barrels

implied a license to the purchaser to make or use additional barrels.

In this case of Davis Electric Works *v.* Edison Elec. Light Co., the Court said, *inter alia:*

> "in no case has the supreme court held that this right (the right of repair) is absolute and universal, or that it may not be limited by express or implied restrictions entering into the transaction of the sale of the patented machine or device."

The Court of Appeals also said in this case:

> "The proposition of the appellants that, if the injunction stands, it gives the complainants below the same benefit as though the patent contained a claim for the filament alone, serves properly to caution us, but cannot operate as a definitive limitation on our conclusions. * * * So, ordinarily, if the new element in a combination is associated in the claim with additional elements which, in the state of the art, there is no practical method of replacing by others, the patentee obtains the same practical advantages as though this new element had been claimed alone, at least until the art makes new discoveries. Neither in such instances, nor in the case at bar, is the course of the law to be turned aside because the practical result may be to give a patentee for the time being more than the patent office contemplated, nor is the patentee to be deprived of his just rights because under some circumstances he gets individual advantages beyond what he expressly bargained for."

The Court also stated:

> "We do not in terms give the patentee the benefit of a claim for the filament alone, nor prohibit its use in some other combination than that set out in the second claim, if some ingenious way of making such other combination is ever discovered."

The Court further stated:

"The appellants do not bring themselves within the expression in Wilson *v.* Simpson, 9 How. 125, renewed in substance in Cotton Tie *v.* Simmons, 106 U. S. 94, and page 52 1 Sup. Ct., to the effect that temporary parts may be replaced 'in accordance with the intention of the vendor.' While the Supreme Court has not expressly given this as a limitation, it may be made effectual as a permit where the facts authorize it."

The Court further stated:

"The suggestion that the worn-out filament in the Edison device stands for the old burned-out wick of an ordinary lamp is not sustainable. So far from the filament being the mere wick, it is itself essentially the lamp; that is, the electric lamp of Edison."

The consumable, burned wick of a patented oil lamp, of which the wick might be a combination, would be a parallel case with the toilet paper in Morgan Envelope Co. *v.* Albany Paper Co.

The Court in this case of Davis Electrical Works *v.* Edison Co., notwithstanding the fragile character of the filament, held that to replace it was an infringement of the patent.

FURTHER CONSIDERATION OF THE MORGAN ENVELOPE COMPANY CASE IN THE SUPREME COURT AND JUDGE WALLACE'S OPINION THEREIN. (40 Fed. Rep. 577.)

Defendant's counsel (Defendant's Brief accompanying the Petition for *Certiorari*, p. 50), treats of the opinion of his Honor Judge Wallace in this case in the Circuit Court, and the endeavor of defendant's counsel is to show that the opinion in this Morgan Envelope Company case in the Court below was intended to include such parts of the combination as complainants'

sound record in this case, which, as has been heretofore shown, was a most important mechanical element of claim thirty-five, co-acting and co-operating with the reproducing stylus, the other element. Defendant's counsel tries to liken it to the consumable roll of toilet paper and to fit Judge Wallace's opinion upon the case at bar.

As I have hereinbefore considered this question of what appears to the complainants to be a radically different question from that involved in the Morgan Envelope Company case, it will be unnecessary to enlarge again upon this subject. Suffice it to say that it is apparent from a careful reading of Judge Wallace's opinion that the underlying fact upon which that decision was based was, as stated in the opinion, that "The paper as an element of the patented invention is *one for temporary use only*. The fixture proper is a durable device which is designed to last for many years; while *the roll of paper may be completely used up in a few days.*"

It is not assumed that Judge Wallace intended to make any such broad statement of the law as contended for by defendant's counsel, that the purchase of a patented device so releases it from the monopoly that the purchaser may manufacture, without further license, vital elements of the combination, such as the hard disc records in this case, and manufacture *ab libitum* any number of them for use in connection with the other element of the machine.

Judge Wallace states:

> "The purchaser who buys a machine or device, patented or unpatented, without any restriction as to the mode or extent of the use to which he may apply it, acquires all rights of the seller, and may do with it whatever the seller might have done if he had not parted with it."

What Judge Wallace meant by this is apparent from the next sentence, wherein he states:

> "He acquires the right to use it, or repair it, and to sell it to others; and those to whom he sells acquire all his rights."

The Court also held that if the purchaser may lawfully repair, it is immaterial if he procures another to do it for him, if the act when done does not violate the rights of the owner of the patent.

It is understood by complainants that Judge Wallace in rendering this decision did not mean to be interpreted as going any further than the well settled doctrine of repairs warrants. It may be fairly inferred from Judge Wallace's opinion that it was not intended by the Circuit Court to go any further than the doctrine laid down in Wilson *v.* Rosseau, 4 Howard, 647, or in Wilson *v.* Simpson, 9 Howard, 109, cited by the Court.

That Judge Wallace was confining his decision within the limits of the doctrine of repair is also evident from the statement on page 581 of the decision, viz.:

> "If it (the right to repair a patented article) did not exist, the value of most patented articles would be materially lessened, and thus the owner of the patent, as well as the public, would fail to derive the full benefit of the invention. There is nothing inconsistent with these views in the case of Cotton Tie Company *v.* Simmons, 106 U. S. 89——"

Of course, the doctrine of contributory infringement has no application to a case where the alleged infringer does no wrong, or does not concert with another to do wrong. Hence there was no contributory infringement in the Morgan Envelope Company case.

If, however, it is found that the party charged with contributing to the infringement has done a wrong in this respect, he, of course, is liable for contributory infringement as in the suit at bar.

The basic principles upon which Judge Wallace's decision was founded in this case were the same as those upon which the Supreme Court affirmed the decision, viz., that the paper was *intended for consumption in use,* and as an element of the combination it was merely placed in the holder or other portion of the combination *as a product or material to be fed out to be used up,* and from the very nature and construction of the thing this was the intention of the owner of the patent.

Therefore the question involved in the Morgon Envelope Company case, instead of being the precise question here involved, as stated by defendant's counsel on page 50 of the said brief, is a radically different proposition, and should have no bearing upon the question involved in this case.

DEFENDANT ALSO AN INFRINGER IN SELLING RECORDS WHERE THEY ARE USED OR INTENDED TO BE USED ON INFRINGING REPRODUCING APPARATUS.

Defendant admits (Brief accompanying Petition for *certiorari,* p. 53) that:

> "The sale of a record by defendant for use upon an infringing machine, that is to say, for use upon a machine not sold by complainants or their licensees, would clearly constitute contributory infringement."

Defendant's counsel contends that there is no proof that the defendant after the injunction sold sound records for use upon an infringing machine. It is shown, however, by complainants' proofs (Middleton affidavit, Contempt Record, p. 21), that there were in use at the time of the Contempt sales throughout the United States many hundreds of reproducers which

had been made and sold in violation of the claims of the patent in suit, among others notably the Talk-o-phone machines enjoined by the Courts below, which were in use in the homes of individuals, hotels, restaurants, places of amusement, and so forth. Mr. Middleton also shows that the owners of these machines are constantly purchasing disc talking machine records for use in combination with this reproducing apparatus, from dealers selling infringing records, such as the disc records which the defendant company has sold and is now continuing to sell, thus depriving the complainants of a very considerable portion of the revenue from these records which form an essential and important element of the combination.

Mr. Middleton also shows that the purchasers of the infringing machines, such as the Talk-o-phone, who at the time of purchase purchased the Leeds & Catlin records with it, are very apt to continue purchasing the make of record which they originally purchased with the infringing machine if the defendant company is allowed to continue the manufacture and sale of the Contempt Sound Records.

RE INTENT TO INFRINGE.

The defendant therefore when these records were sold over the counter since the service of the injunction, had reason to believe that the infringing records thus sold (except those which were sold with knowledge that they were to be used in connection with complainants' reproducer), might and probably would be used in combination with some of these infringing reproducers; it was shown by the proofs in the injunction proceeding that the defendant company supplied large quantities of records for the Talk-o-phone users.

In the case of Thomson-Houston Electric Com-

pany *v.* Ohio Brass Company (80 Fed. Rep. 712), Judge Taft in delivering the opinion of the Circuit Court of Appeals for the Sixth District, said relative to this question as to intention to infringe:

> "But where the article can only be used in a patented combination the inference of the maker and seller is certain, and the right of the patentee to injunction ought we thing to be equally certain."

Thomson-Houston Electric Co. v. Ohio Brass Co., 80 Fed. 712 (C. C. of A., Sixth Circuit).

The attention of the Court is called to the decision of Judge Taft in this case on the question of contributory infringement where the authorities are quite fully reviewed.

> "It is well settled that where one makes and sells one element of a combination covered by a patent with the intention and for the purpose of bringing about its use in such a combination he is guilty of contributory infringement and is equally liable to the patentee with him who in fact organizes the complete combination. The leading case on the subject is Wallace *v.* Holmes, 9 Blatchf. 65; 29 Fed. Cas. 79. * * * An infringement of a patent is a tort analogous to trespass or trespass on the case. From the earliest times, all who take part in a trespass, either by actual participation therein or by aiding and abetting it, have been held to be jointly and severally liable for the injury inflicted. There must be some concert of action between him who does the injury and him who is charged with aiding and abetting, before the latter can be held liable. When that is present, however, the joint liability of both the principal and the accomplice has been invariably enforced. If this healthful rule is not to apply to trespass upon patent property, then, indeed, the protection which is promised by the constitution and laws of the United States to inventors is a poor sham. Many of the most valuable patents are combinations of

non-patentable elements, and the only effective mode of preventing infringement is by suits against those who, by furnishing the parts which distinguish the combination, make it possible for others to assemble and use the combination, and who, by advertisement of the sale of such parts, and otherwise, intentionally solicit and promote such invasions of the patentee's rights."

Judge Taft further stated:

"It is said that no concert of action by defendant with any one for the purpose of accomplishing an infringement of complainants' patent rights is shown. As already stated, it does appear that defendant is offering for sale articles that can only be used in combinations covered by complainants' claims. This is an effort to secure a concert of action by which the combinations of complainants' patents may be assembled. If successful infringement will follow; hence the preliminary steps which are intentionally taken to bring about the injury may be enjoined."

Wallace v. Holmes, 9 Blatch. 65; 29 Fed. Cases, 79.

In this case Judge Woodruff said:

"Here the actual concert with the other is a certain inference from the nature of the case, and the distinct efforts of the defendants to bring the burner in question into use, which can only be done by adding the chimney. The defendants have not, perhaps, made an actual pre-arrangement with any particular person to supply the chimney to be added to the burner; but every sale they make is a proposal to the purchaser to do this, and his purchase is a consent with the defendants that he will do it, or cause it to be done."

This doctrine is quite analogous to that involved in the consideration of the subject of contributory infringement, and is covered by the cases there referred to.

ADDITIONAL AUTHORITIES RE CONTRIBUTORY INFRINGEMENT AND PRESUMPTION OF INTENT.

Schneider v. Poutney, 21 Fed., 399.

This case was decided by Judge Nixon, in the Circuit Court, for the District of New Jersey. This was a suit under a patent to one Votti, for a Shade Holder for Lamps, and is particularly in point. Judge Nixon in the opinion, p. 403, says:

> "The allegations of the bill of complaint, as to the infringement of the defendant, are (1) that certain shade-holders, made and sold by the defendant, are only used in Votti's combination, and are not applicable to or useful for any other purpose; and (2) that the defendant knew this fact, and made and sold said shade-holders with the knowledge that they could be used by the purchaser thereof in constructing said patented combination in infringement of said patent, and that he made and sold them for that purpose."

Thus we have a parallel with the case at bar, for we have shown that these defendant records are only used in the combination of the patent in suit, and are not applicable to or useful for any other purpose; and further that the defendant knew this fact and made and sold these sound records with the knowledge that they could be used by the purchaser in the patented combination. The learned Judge then further states, as follows, p. 403:

> "In regard to the first allegation, the complainant's expert, Brevoort, and his agent in patent matters, Hanford, both explicitly state that they know of no other uses to which the shade-holder, made by the defendant and complained of by the complainant, can be applied, except in combination with the other devices of the Votti patent, and that they never heard of their being put to any other use. This testimony stands uncon-

> tradicted except by the suggestion of defendant's counsel of possible use to which such shade-holders might be applied. I recollect nothing from the defendant himself or from any of his witnesses which shows, in fact, any other application."

As to the case at bar, we have the affidavits of Haddon, Middleton and Kennedy, that they know of no other use to which the sound records of the defendant can be applied, and this testimony stands uncontradicted except by the suggestion of the opposing affidavits, that a mechanical feed machine has been advertised, *but not sold*. The learned Judge then says, p. 403, regarding the second allegation that,

> "As to the second allegation, referring to the intent of the defendant in his manufacture of the shade-holder, I think it is fairly to be inferred, (1) from the conversation of the defendant with Hanford; (2) from his attempts to get from the complainant an exclusive right to manufacture the shade-holder; (3) from the tenor of the circulars that he prepared and sent out; and (4) from his absolute silence when upon the witness stand, in regard to any other use for which he manufactured them, that his intent in making and selling them was to have them used in combination with the other devices of the complainant's patent."

So also in the present case, we submit the inference is stronger when it is borne in mind that Leeds knew that thousands of infringing machines were in public use all over this country and that these defendant records could only be used with that class of machine, in the combination of the patent in suit, which machines this defendant had also sold, and also knew that this alleged mechanical feed machine was not on the market. With the facts as above set forth, Judge Nixon stated, p. 403, the law as follows:

"The law in such cases has been quite definitely settled. The first case to which I would allude is the leading one of Wallace *v.* Holmes, 5 Fisher, 37. The patent there was also for an improved lamp, consisting of the combination of several parts. The alleged infringement was for the manufacturing and selling one of the elements in the combination, to wit, the burner. It was used in combination with a chimney, and the purchasers of the burners were expected to go into the market and procure the chimneys from other manufacturers. Judge Woodruff held that the defendants could not protect themselves by invoking the well-settled rule that where a patent is for a combination merely, it is not infringed by one who uses one or more of the parts, but not all, to produce the same results, either by themselves or by the aid of other devices; but that if one party consented to make the burner, and another party the chimney, and each was sold to be used with the other, the parties must be deemed to be joint infringers of the patent, and that each was liable for all the damages. The learned Judge drew the inference of an actual concert between the parties from the nature of the case, and the distinct efforts of the defendants to bring the burner in question into use, which could only be done by adding the chimney. *He admitted that he found no proof that the defendants had made an actual pre-arrangement with any particular person to supply the chimney to be added to the burner; 'but,' says he, 'every sale they make is a proposal to the purchaser to do this, and his purchase is a consent with the defendants that he will do it, or cause it to be done. The defendants are, therefore, active parties to the whole infringement, consenting and acting to that end, manufacturing and selling for that purpose.'* "

Therefore, as will be seen in Bullock Co. *v.* Westinghouse Co., 129 F. R., 111, and in this case of Schneider *v.* Pountney, that where one element of the combination is made and sold, with the knowledge that it can

only be used in the patented combination, the intent that it shall be used and the intent to contribute to the infringing act is presumed to have been shown and that it is not necessary to show the same affirmatively, for as Judge Nixon, in Schneider *v.* Pountney, said, that although he found no proof that the defendant had made an actual pre-arrangement, he drew the inference of an actual concert.

In Walker on Patents, in discussing the subject of contributory infringement, the author states, Sec. 407:

> "Contributory infringement is intentional aid or co-operation in transactions, which collectively constitute complete infringement. For example; where a person furnishes one part of a patented combination, intending that it shall be assembled with the other parts thereof, and that the complete combination shall be used or sold; that person is liable to an action, as infringer of the patent on the complete combination."

Citing authorities. Further on in this section the author also states:

> "Furthermore, where a person furnishes a machine, composition of matter or other article, which is particularly adapted to be used in performing a patented process, and which the person furnishing the same, intends shall be thus used; that person is liable as a contributory infringer for any infringement which afterward occurs in accordance with his intention."

In support of this proposition the author refers, among others, to the following cases:

Boyd v. Cherry, 50 Fed. Rep. 279.

The patent involved in this suit was for a process of raising cream which consisted mainly in water-sealing the milk within the vessel containing it, and also

submerging said vessel in water. The defendant made and sold a milk can within which the milk could be water-sealed, and which could be submerged in the water.

The Court stated, in granting the injunction, as follows:

> "I doubt very much whether the mechanical appliances described in each of the patents is patentable aside from the process. Considered merely as cans or milk vessels, there would seem to be little, if any, novelty in them. But however this may be, it appears, from an inspection of the Cherry patent itself, that it is intended to cover the process, and that the cans are to be used only for the purpose of raising cream in the manner described. Besides, the evidence discloses the fact beyond question that the respondent manufactures the 'Hawkeye pan' and sells it to customers to be used by them in raising cream from milk according to the process described in the Cooley patent. He advertises and sells the can for this very purpose. They are especially adapted to it, and to no other, and the inference arising from their sale, that they are to be used, would be very strong. When it is added that they are generally, if not always, accompanied by directions to purchasers as to the mode of using them, which directions require the adoption and use of the Cooley process, it becomes very clear that the fact of infringement is established. Bowker *v.* Dows, 3 Ban. & A. 518; Chemical Works *v.* Hecker, 2 Ban. & A. 351; Wallace *v.* Holmes, 9 Blatchf. 65."

So also in the case at bar, for although the defendant denies the patentability of the record by itself, yet the records which it is selling are capable of use and are intended for use with the reproducer of claim thirty-five, and to be used in carrying out the process and method of claim five. It is not necessary, in this talking machine art, to put special directions upon the records as to the mode of using them, for there is

absolutely no other use for such an article except for reproducing upon a disc talking machine of the character of the patent in suit, and as manufactured by the Victor Talking Machine Company.

Celluloid Mfg. Co., et al., v. American Zylonite Co., et al., 30 Fed. Rep. 437.

The claim of the patent in suit was for a fabric for the manufacture of collars and cuffs, etc., having outer sheets or layers of celluloid, and an inner lining of textile or fibrous material. In this case, two sheets of cloth or muslin, with a paper inner lining, was made by the Taylor & Tapley Company, one of the defendants; then the Zylonite Company placed a thin sheet of zylonite on one side of this fabric and returned it to the former company, which latter turned down the zylonite so it would be on both sides of the collar, and the defence was that neither made the patented article, and Judge Shipman writing for the Court stated:

> "It is apparent that the American Zylonite Company made the compound sheet for the Taylor & Tapley Company, with knowledge of the method in which it was to be used by that company in the manufacture of collars. * * * It was engaged with the other defendants in a common purpose to avoid the patent, and, in connection with them, it actually, by their concerted action, infringed the patent."

A motion for preliminary injunction was granted, and in the present case, complainants' affidavits show that the defendant was aware that the sound records sold by it, and produced in these contempt proceedings, were to be used in completing the combination of the claims of the patent in suit, and in infringement of said patent.

Alabastine Co. v. Payne, 27 Fed. Rep. 559.

The claim of the patent involved was for,

"a calcimining compound, adapted to be used with brushes, composed of pulverized calcined gypsum, dissolved glue, and cold water, substantially as described."

The defendant used a dry mixture of pulverized calcined gypsum and glue, which the purchaser reduced to liquid by dissolving in water, and it was claimed that defendant did not infringe the patent. Judge Coxe in denying the motion to dissolve the injunction said:

"In selling a compound which he knows cannot be practically applied without making the user a trespasser, the defendant, within the doctrine of the following authorities, renders himself an accessory to the infringement: Rumford Chemical Works *v.* Hecker, 2 Ban. & A. 351, 363; Cotton Tie Co. *v.* Simmons, 106 U. S. 89, 94-95; S. C. 1 Sup. Ct. Rep. 52; Tilghman *v.* Proctor, 102 U. S. 707, 728; Goodyear *v.* Railroad Co., 2 Wall Jr. 356, 359; Wallace *v.* Holmes, 9 Blatchf. 65; Woodward *v.* Morrison, 1 Holmes, 125; Bowker *v.* Dows, 3 Ban. & A. 518; Travers *v.* Beyer, 26 Fed. Rep. 450."

This case was cited by Judge Nixon, in the District of New Jersey, in Rumford Chemical Works *v.* Hecker (2 Ban. & A. 351; Federal case, No. 12,133) in deciding that a defendant infringed who sold the constituents of complainant's patent with intent and further purpose of enabling the infringer to turn the compound into bread by the application of water and heat.

And the Courts have gone farther and held that all those who took part in aiding the sale and use of an article in infringement of a patent are liable to be enjoined for such acts.

American Cotton-tie Supply Co. v. McCready, et al. (17 Blatch. 291; Federal Case No. 295).

Bill was brought against the officers of the Old Dominion Steamship Company, upon whose steamships the infringing cotton-ties were shipped from New York to ports in southern parts of the United States, where they were sold and used, the defendant refusing to disclose the names of the parties from whom the ties were received, and Judge Blatchford, writing for the Court stated:

> "It is entirely clear that the owners of infringing and unlicensed cotton-ties, who are causing them to be transported by the vessels of the Old Dominion Steamship Company, are sending them for sale and use, and are employing said company and its officers as agents and servants in promoting and effecting such sale and use. It would seem, on principle, that there ought to be no difficulty in restraining by injunction all persons, whether officers of a corporation or not, who are aiding in the promotion of the infringing sale and use, whether such persons would be liable for profits or damages or not. It has been so held by this Court."

This was a case, as will be seen, where the defendant had not even manufactured, used or sold the infringing article or any part of it.

Robinson on Patents, Vol. 3, Sec. 905:

> "To sell a part of the invention with the intent that it shall be united or used in connection with its other parts, to sell a different article with the intent that in its use it shall become the one claimed in the patent, to transport knowingly for use and sale in collusion with infringing makers or vendors, are also acts of infringement."

Snyder, et al., v. Bunnell, et al., 29 Fed. Rep. 47.

The statement of Judge Coxe in the above entitled cause is particularly in point (page 48, 29 Fed. Rep.):

> "The complainants invoke the doctrine of contributory infringement, the clearest illustration of which is, perhaps, found in Wallace *v.* Holmes, 9 Blatchf. 65. In that case the complainants had a patent for a burner in combination with a chimney. The defendants manufactured and sold the burner, leaving the purchaser to supply the chimney, without which the burner was useless. The burner could not be used without infringing the patent. All this the defendants knew. It was because of this use and this knowledge that they were held liable. See, also, Richardson *v.* Noyes, 10 O. G. 501; Bowker *v.* Dows, 3 Ban. & A. 518; Alabastine Co. *v.* Payne, 27 Fed. Rep. 559; Travers *v.* Beyer, 26 Fed. Rep. 450; Cotton Tie Co. *v.* Simmons, 106 U. S. 89; S. C. 1 Sup. Ct. Rep. 52."

THE DOCTRINE OF REPAIR HAS NO APPLICATION TO THE PRESENT SUIT.

It is respectfully submitted that the doctrine of "repair" cannot be invoked in this case.

Davis Electrical Works v. Electric Light Co., et al., 60 Fed. Rep. 276.

In this case it was held that the defendant infringed the Edison incandescent electric lamp patent, because he substituted in an old lamp the vital element of the combination, viz., the filament. The defendant bought old lamps, made a hole in the bulb, put in a new filament, exhausted the air, and closed the hole.

The claim read as follows:

> "(2) The combination of carbon filaments with a receiver made entirely of glass, and con-

ductors passing through the glass, and from which receiver the air is exhausted, for the purposes set forth."

Thomson-Houston Electric Co. v. Kelsey Electric Railway Specialty Co., et. al., 75 Fed. Rep. 1005 (C. C. of A., Second Circuit).

In this case, while the Court held that a broken trolley stand, one of the elements, might be replaced, it said:

"It is not intended to permit the unauthorized substitution of the vital and distinctively new part of an invention in place of one worn out by use, as the substitution of a new filament in an Edison incandescent lamp or the substitution of a new for the old burner in the Wallace case."

Morrin v. Robert White Engineering Works (C. C., 138 Fed. Rep. 68).

This case stated numerous instances where repairs could be effected of ordinary working parts, and concluded:

"But a part of a combination may not be replaced by the purchaser when it is the vital element of the combination, in fact, and in regard to patentability, especially when it is not intended to be of short life by the action of external forces thereon."

Red Jacket Manufacturing Co. v. Davis, 82 Fed. Rep. 432 (C. C. of A., Seventh Circuit).

In this case it was held that the making and selling of pumps, leaving out one of the important elements to be supplied by the purchaser, was an infringement. The Court said:

"They do not, indeed, make the lower cylinder, but they manufacture pumps to be used in

tubular wells, the tube and valve placed therein supplying the lower cylinder and valve of the patent. Their pumps are inoperative and useless unless so constructed. The case presented is therefore one of contributory infringement."

Stearns v. Philips, 43 Fed. Rep. 792.

In this case the Court held that while the making of the bars for the patented window frame screen was not in itself an infringement, the making of them with an intention to combine them in the patented device was an infringement.

By defendant's reference to the case of Aiken *v.* Manchester Print Works, 2 Cliff., 435, referred to by Mr. Justice Brown in the quotation from the Morgan Envelope Company case (Defendant's Brief, p. 59), he attempts in substance to contend that if any element of a patented combination, even though a combination consisting only of two elements, no matter how vital and important the element may be, is not patented itself by separate patent independent of the patent of the combination, the purchaser of the combination and any one for him can make that vital and important element *ad libitum*.

Under circumstances of this character his argument would apply equally as well *to the other element* of the combination, and as a consequence involve a *reductio ad absurdum*, viz., that all the elements could be re-made and in multiple quantities, thus practically annulling and destroying the patent of the combination, even though the same may have been sustained by the highest Court of the land.

In the case of Aiken *v.* Manchester Print Works the needles of the knitting machine were also patented by a separate patent, but this case did not mean to decide that only such elements of a patented combina-

tion which were patented by a separate patent could be protected against contributory infringement.

The attention of the Court is called to the case of Wagner Typewriter Co. *v.* Webster Co., 144 Fed. Rep. 495, cited on page 59 of defendant's said brief accompanying the petition for *certiorari,* in which Judge Ray reviews the authorities quite fully and the extent of the doctrine of repair. He distinguishes between an element of the combination which is an *ordinary working part* and an element of the combination which is *a vital element.*

Cortelyou, et al. v. Johnson, 154 Fed. Rep., 933.

In this case the Circuit Court of Appeals for the Second Circuit discussed this question of contrbutory infringement, the contributory infringement alleged in said case being the sale of ink by the defendant to be used with the patented device of the complainant, which patented device was sold under restriction that it could be only used with, among other things, ink made by the complainant company. Although the Circuit Court of Appeals for the Second Circuit reversed the court below, on the ground that there was not evidence that the defendant had notice of these restrictions, (affirmed by this Honorable Court, 207 U. S. 196), yet in discussing the doctrine of contributory infringement, the Court stated (p. 934):

> "One who sold an element of a patented combination, which could not be used except in an infringing combination or device, was not permitted to reap the benefits of such sale. He did not himself directly infringe, but he promoted the infringement of others by putting in their hands a device which could only be used in violation of the patent."

And near the bottom of page 935, the Court said:

> "We incline to the opinion that the line should be drawn to include those articles which are either parts of a patented combination or device or which are produced for the sole purpose of being so used and to exclude the staple articles of commerce."

The defendant's acts in the present case come squarely within the language above quoted, for the sound record is one of the only two elements of the combination of the claims of the patent in suit, and is, therefore, "an element of a patented combination, which could not be used except in an infringing combination or device," as stated in the first above quotation, and is a part of the "patented combination or device" of the claim sued on, and "are produced for the sole purpose of being so used," as last above quoted.

RE DEFENDANT'S POINT TWO.

Under this head the defendant contends that the purchaser of a patented combination has the legal right immediately to substitute for an important or essential element of the combination, one which he conceives to be *better suited* to his purposes, even though such element was intended to be permanent.

Defendant's counsel in an attempt to support this proposition (brief accompanying petition for *certiorari*, p. 60), refers to the Trolley Stand decision in the case of Thomson-Houston Electric Co. *v.* Kelsey Electric Railway Specialty Co., *et al.*, 75 Fed. Rep. 1005. This is a decision of the Court of Appeals for the Second Circuit rendered by Judge Shipman.

The trolley stand, so-called, was the means by which the trailing arm was hinged and pivoted to the car, which arm has a capacity for lateral and vertical movement, and is pressed upward by some suitable

spring. No particular stand was included in the patent. The defendant sold stands, one of which was purchased and used for the purpose of the infringement complained of.

This case involves a very materially different question, in that among other things the trolley stand was not the vital element of the combination, such as the complainants' record in suit at bar, and the Trolley Stand case turned upon the doctrine of repairs in cases similar to that of the replacement of knives in the planing machine in Wilson *v.* Simpson, 9 How. 109, and like cases, the Court distinguishing the Trolley Stand case from the Filament in Davis Electrical Works *v.* Edison Electric Light Co., 60 Fed. Rep. 276. The Court in deciding the right to replace the trolley stand said:

> "It is not intended to permit the unauthorized substitution of the vital and distinctively new part of an invention, in place of one worn out by use, as the substitution of a new filament in the Edison Incandescent Lamp, or the substitution of a new for an old burner in the Wallace case, *supra* (Holmes *v.* Wallace, 9 Blach. 65; Fed. cases, No. 17,100), but the trolley stand is not the vital element of the invention, though a portion of it is an element of the combination. It is the means, and in most cases the non-patented means, for there are numerous forms of these bases by which the pole is permitted to perform its functions."

It also appeared in this case that the purchaser of the trolley stand had a reason for substituting this stand, which was less elevated above the top of the car than complainant's stand, because of the low bridges under which the trolley cars on some of the streets were obliged to go, and that the defendant had a right to sell and the purchaser to use such a stand for the purpose.

In this case his Honor Judge Wallace filed a dissenting opinion, in which he set forth the fact that the defendant had a perfect right to make such an element of the patented combination as a trolley stand, and that the defendant was under no obligation to inquire whether the purchaser intended to make an illegal use of it. In that case there was apparently no evidence that the defendant knew that the trolley stands were to be used by the defendant in the patented combination, and there was no obligation on the part of the defendant to inquire.

In the case at bar, however, the defendant sold a most vital element of a two-part combination with the knowledge in one instance that the purchaser, Platz (Contempt Rec., p. 14), dealt exclusively in complainants' patented goods, machines and records, and in another case sold to individuals with the knowledge that they were to be used on complainants' reproducer. Bennett's affidavit (Contempt Record, p. 17) states, "I asked him (defendant's salesman) if I could use these (defendant's contempt) records on this Victor Talking machine (a Victor V) and he told me that I could, and went on further to state that he had at his home a Victor Talking Machine on which he played similar records." Also Thompson's affidavit (Contempt Record, p. 18) states:

> "I then asked said (defendant's) salesman if I could use said records which I so intended to purchase on a talking machine of the manufacture of the Victor Talking Machine Company, and said salesman in reply to said inquiry said that I could."

He then bought the said records.

Judge Wallace in this connection states, in the above mentioned Trolley Stand case (75 Fed. Rep., 1011):

"One who assists another to infringe a patent

is, of course, a *tort feasor;* and whether he is called a contributory infringer or merely an infringer is only a matter of nomenclature."

Judge Wallace, however, shows that where the evidence of unlawful intent on the part of the defendant is shown in cases of this character there is contributory infringement.

The order in this above mentioned case was particular to state, *"but this permission does not give authority to reconstruct or rebuild a combination which has been sold by the complainant."*

This case allowed the right to substitute a metal trolley stand, which was a minor element of the combination, for the one purchased from the patentee, as the purchaser, the trolley company, found that the original stand was elevated too high above the roof of the car for convenience in going under certain low bridges.

It will be noted that this was a *substitution,* that is, the old stand was discarded and the new one put in its place. This has nothing to do with the proposition of the purchase of numerous sound records as a means of increasing a repertory.

It is respectfully submitted that there is nothing in this Trolley Stand case which is in conflict with complainants' position, and that it certainly does not support the defendant's position as regards the present case.

Although Judge Wallace referred to the "Trolley Stand" case, in support of the proposition that the defendant had a right to make the sound records, one element of the two-element combination, yet the majority opinion of the Court of Appeals also cites this case as an authority in passing on this question, and states (Contempt Rec., p. 93, fol. 141):

"We think this contention disposed of by Thomson-Houston, etc., Co., *v.* Kelsey, etc., Co., 75

> F. R., 1005; for the right of substitution there recognized was specifically restricted so as to refuse 'authority to reconstruct or rebuild a combination which has been sold by the complainant;' and whenever a Leeds & Catlin record is placed in a Victor machine the patented combination is instantly reconstructed."

While it may be contended that the unrestricted sale of a patented combination, may carry with it dominion over the article so sold, and may confer upon the purchaser and his vendees the right to hold and deal with it the same as in case of any other description of property belonging to him, yet, we submit, such sales do not confer the right to re-construct. The patent in suit gives the complainants the exclusive right to manufacture the patented combination. The defendant constructs one of the vital elements of the combination to enable others, who own the other element of the combination, to re-construct this patented combination.

We submit that this question is conclusively answered at the conclusion of the opinion of the Circuit Court of Appeals upon which this petition is based, where it is stated (Contempt Rec., p. 93, fol. 142):

> "The true inquiry is whether the owner of a patented combination, the elements of which are durable, unbroken, and in good repair, may buy from the patentee one specimen of a single element,—from an outsider an indefinite number of identical specimens of the same element, and keep and use them all, under cover of the word 'substition;' it further appearing that the element so procured and used is useful and commercially known only in respect of the said combination.
>
> "We think this cannot lawfully be done, and affirm the order below."

Defendant Contends it has Right to Substitute or add 1000 Records.

Defendant's counsel contends (Defendant's Brief accompanying the petition for *certiorari,* p. 63), that if the purchaser has the right to substitute one sound record for a sound record purchased from complainant with the reproducer, he has the right to substitute or add *a thousand records* for use on the reproducer, as well as a single record, for the original one purchased.

This we submit is clear evidence of the extremes to which defendant's doctrines go, and of the erroneous position which defendant's counsel has taken.

This is substitution run wild.

The complainants' position is in no manner contrary to the principles laid down in Chaffee *v.* Belting Co., 22 How., 217, and cases therein cited, but the principles therein stated are in accord with the principles underlying complainants' contention.

In the present case, the complainants' reproducer, as shown by Mr. Haddon's affidavit (Contempt Rec., p. 24), which is only one part of the combination, is sold for a price which only relates to the reproducer. Complainants' records, though they may be sold with the reproducer are sold for a distinct, independent price, and the purchaser can purchase as many records with each reproducer from the complainant as he desires to, either at that time or from time to time thereafter. The sale of the reproducer only pays a royalty on that one element of the combination, and it therefore cannot free the other element. The sale of the record at an independent price frees that particular record, but it does not free the other element.

As shown by Mr. Haddon's affidavit (Contempt Rec., p. 24), if the sale of the reproducer, one element of the combination, was going to free also the record,

the other element of the combination, without a purchase of that element of the combination from the complainant, then the price of the reproducer, in order to give to the complainant its proper reasonable profit for the entire patented combination, would have to be changed and raised.

It is, therefore, clear that the doctrines of Mitchell *v.* Hawley, 16 Wall., 544, and other cases cited on pp. 65-67 of defendant's brief accompanying the petition for *certiorari,* have no application, at least as far as this point is concerned, to the case at bar.

RE DEFENDANT'S POINT THREE.

Defendant very naturally seeks to draw a distinction between the decision of Judge Shipman in American Graphophone Co. *v.* Leeds (87 Fed. Rep., p. 873), and Same *v.* Amet (74 Fed. Rep., p. 789), on the one hand, and the infringement in the case at bar on the other hand. (See Defendant's Brief accompanying the petition for *certiorari,* p. 68, etc.)

Re American Graphophone Co. v. Leeds.

The decision of Judge Shipman, in the case of American Graphophone Co. *v.* Leeds, *supra* (said Leeds, being the Loring L. Leeds, whose affidavit on behalf of the defendant in this suit appears at page 63 of the Contempt Record), is markedly applicable to the case at bar, as the circumstances of the two cases are quite similar. Some of the claims of the patent in suit involved the combination of the reproducing style, and the wax cylinder record of the vertically undulating type. The defendant sold an infringing reproducer for the purpose of reproducing sound from records made and sold by the complainant. The

defendant defended largely on the ground that, as the complainant sold the records, the purchaser had an implied license or right to supply the reproducing element. Judge Shipman, however, held that this was not so, and that the sale of the reproducing element was a contributory infringement.

He said (87 Fed. Rep., p. 878):

> "The defendants' device is an economical infringement of one element of the claim, which is sold for the purpose of being used in connection with the other element. The design of the defendants' machine, and their intent in selling it, are to have it used in connection with the engraved sound record of the complainant. * * * Infringement of the combination of claims 22, 23 and 24, is the legal result."

The Court had previously said that

> "The defendants' machine is simply for the purpose of reproducing the customary wax-like sound record of the patent, which are cut in a groove with sloping walls."

It is respectfully submitted that the circumstances of this Leeds case, and of the case at bar are very similar, and that the doctrines as laid down by Judge Shipman, are decisive of the case at bar.

Defendant's counsel, however (Defendant's Brief accompanying petition for writ of *certiorari*, p. 68, etc.), attempts to differentiate this case from the case at bar, on the ground that the reproducer was sold by the defendant in that case, and not the record, and that, therefore, the reproducer corresponded to the fixture of the Morgan Envelope Co. case, and the planing machine case, and differed, therefore, from the case at bar.

It will be observed, however, that Judge Shipman practically decides this point involved in the case at bar, by showing that the reproducer of a talking ma-

chine is no more important an element than the sound record. He shows that they are both equally important to the patenteed combination, and says that they are "*equally important.*"

Judge Shipman said:

> "The material of the record and the reproducer are each necessary parts of the invention. Either part without the other would be ineffectual, but in combination both tend to make an operative and successful instrument."

Judge Shipman also here quotes from the decision of Judge Grosscup in American Graphophone Co. *v.* Amet (74 Fed. Rep., 789), where Judge Grosscup also regards the two elements of equal importance, in fact, he seems to regard the sound record of greater importance, if anything.

Judge Grosscup says (p. 791):

> "Either, without the other, would be useless for the purpose of a graphophone or phonograph. Together they bring about a successful result. They therefore constitute a patentable combination."

Judge Shipman also says in said American Graphophone Co. *v.* Leeds (p. 876):

> "This peculiarity of the dual invention of the material for an engraved record and the reproducer, and the fact that the latter was brought into being to make the former of practical value, is of much importance in the proper construction of the quoted claims of the patent, if it should be held that the reproducer alone, though novel, is not patentable."

It will therefore be seen that both Judge Shipman and Judge Grosscup, in these cases, in considering a sound reproducing aparatus, consisting of a repro-

ducer and a record; **regarded the record as of equal, if not greater, importance than the producer element.**

It will also be borne in mind that the case at bar is even stronger in this regard than the American Graphophone *v.* Leeds, or the Amet case, as in those cases the record element was a destructible *wax* cylindrical record, not a record of hard, indestructible material, like the complainants' disc in this case.

It is, therefore, apparent that neither Judge Shipman nor Judge Grosscup regarded the reproducing element of the combination as any more durable, or important, than the record element, and that defendant's effort to liken these cases to the Morgan Envelope Co. case, and to the planing machine case must fail.

We have, therefore, the material question involved in the case at bar substantially adjudicated in American Graphophone Co. *v.* Leeds, and in the Amet case.

The defendant also (Brief accompanying petition for writ of *certiorari*, p. 68) tries to distinguish these cases from the case at bar, on the ground that they were for contributory infringement.

That is exactly what the defendant in the case at bar is liable for, among other things. The cases which have held that they were not cases of contributory infringement, are cases where the defendant has been held to do no wrong, and of course, therefore, could not be chargeable with contributing to a wrong.

If, however, the defendant is found to have done a wrong under the circumstances of the present case, he is chargeable with contributory infringement, as in the American Graphophone Co. *v.* Leeds, and in the Amet case.

It would make no difference, in the decision in the American Graphophone Co. *v.* Leeds, or in the Amet case, whether the American Graphophone Co., had sold reproducing apparatus with their records, or whether

they sold records without the reproducing apparatus, as in either case the defendant would be liable for contributory infringement.

That Judge Shipman, in his decision in the Trolley Stand case (Thomson Houston Electric Co. *v.* Kelsey & Co., 75 Fed. Rep., 1005), never intended that the rule laid down by him in the Trolley Stand case should be applicable to the records or reproducing apparatus of a talking machine, is clear from his decision in American Graphophone Co. *v.* Leeds, he having also rendered the decision in the Trolley Stand case.

Re American Graphophone Co. v. Amet, 74 Fed Rep. 789.

The defendant contends (Brief accompanying petition for writ of *certiorari*, p. 69, etc.), that Judge Grosscup clearly recognized the alleged right of the purchaser from the patentee of the sound reproducing apparatus to replace the records, originally purchased as a part of the combination, with an unlicensed record. This, we submit, is an unwarranted inference, and that Judge Grosscup makes no such decision. The claims in controversy in that case were claims 22 and 24 of the Bell & Tainter Patent, No. 341,214 (Inj. Rec., p. 387), the said claims being two of the same claims involved in American Graphophone Co. *v.* Leeds.

That Judge Grosscup regarded the two elements of the combination, viz.—the reproducing stylus and the cylindrical wax record, of equal importance, has hereinbefore been pointed out. He says (p. 791):

> "Either, without the other, would be useless for the purpose of a graphophone or phonograph. Together they bring about a successful result. They, therefore, constitute a patentable combination."

The defendant, as in the Leeds case, made and

sold a reproducer, one part of the combination, which was intended to be used in conjunction with complainant's cylindrical records. Judge Grosscup said (p. 791):

> "Without the complainant's record the defendant's device would be useless. It is never used except in connection with complainant's record. In the practical use, therefore, of defendant's device, one of the elements of complainant's combination is actually and necessarily employed."

Judge Grosscup also stated (p. 791):

> "It appears, however, that these records are sold by the complainant on the open market, and it is contended that such sale releases this element of the combination from the monopoly of the patent. I do not concur in this view. To make the graphophone more widely useful, the complainants make many records, embodying music, speech and other sounds, and distribute these, by sale, to the users of the phone. But the record thus distributed remains an integral part of the combined mechanism. It is not a product of the machine, but still a part of it."

Judge Grosscup, therefore, decides that no implied license to make, or sell, or use the other part of the combination, is granted by the sale of one part of the combination of a sound-reproducing apparatus to a purchaser.

Judge Grosscup also decides that the part sold remains an integral part of the combined mechanism.

Judge Grosscup also draws the distinction between this and many other cases, in that in sound reproducing apparatus, the object and intent of the owners of the patent is to sell records **having different selections thereon to the users of the phone.**

He also shows that in sound reproducing appa-

ratus, the record is *not a product* of the machine, but is a part of it.

Defendant's counsel, on page 70 of the brief accompanying petition for writ of *certiorari,* italicises certain portions of the quotation from Judge Grosscup's opinion in this case, which defendant's counsel evidently misunderstands. If the defendant's construction of the italicised portion should have been intended, the injunction which Judge Grosscup granted would not be a logical sequence, nor would Judge Grosscup's conclusions follow.

It is clear from a careful reading of the entire decision, that he did not mean what defendant's counsel interprets. After Judge Grosscup had made the statement of the above quoted portion of his decision, he went on to state (being the portion italicised in Defendant's Brief accompanying petition for writ of *certiorari,* p. 70):

> "It is not unusual, in many mechanisms, that some elements of their combination must be more frequently renewed than others. The sale of such parts, segregated from the machine, is only the replenishing of the combination by a substitution of a new element for the one worn out. Such action does not break the patentability of the combination. So, in this combination, substitution by sale of one or many records for another, though not due to the same necessity, ought to receive the same consideration."

Judge Grosscup meant that the sale, of such parts referred to, by the patentee "does not break the patentability of the combination," or, in other words, does not imply any license to the purchaser to make or sell the other part—the patentability of the combination is not broken by such action.

Judge Grosscup then goes on to say:

> "So, in this combination, substitution by sale

> of one or many records for another (by the patentee), though not due to the same necessity, ought to receive the same consideration."

That is, the sale by the patentee of this record, a material part of the patented combination, ought to receive the same consideration, and does not break the patentability of the combination, and does not imply rights to the purchaser to substitute.

Judge Grosscup then cites the instances of the keys of a piano, which he evidently means may be replaced by the patentee without releasing the combination, of which the keys are an element, from the monopoly of the patent; and then goes on to state that he sees no reason why the record of a graphophone may not, though for a different purpose, be likewise replaced by the patentee, without breaking the validity of the combination of his patent.

This construction is in strict accord with Judge Grosscup's opinion in this case, and is the only logical construction, especially in view of the sentence which immediately follows the above quotation as a conclusion, viz. (p. 791):

> "Inasmuch, therefore, as defendant's device is only to be used in connection with one of the elements of complainant's patentable combination, I am of the opinion that it infringes such combination as is expressed in claims 22 and 24, already quoted."

The defendant's counsel (brief accompanying petition for *certiorari*, p. 71), endeavors to draw a distinction between the Amet case and the case at bar, in that in the case at bar, there was an implied license by the sale of the reproducer and the record. It will be observed, however, that Judge Grosscup distinctly points out, where an implied license is contended for, that he does not concur in this view.

In the Amet case, Judge Grosscup shows that the complainants made many records, embodying music, speech, and other sounds, to sell to users of the patented phone.

There is also, therefore, no warrant for the alleged distinction which the defendant seeks to draw between these two cases namely, that in the Amet case there was no purchase of the combination from the patentee. Such a distinction is manifestly unwarranted, from a careful reading of the Amet case.

RE DEFENDANT'S POINT FOUR.

By this point, defendant contends that the complainant should have sold the reproducers *with restrictions,* to the effect, that nobody except the complainant could supply records to complete the combination.

The defendant, in support of this proposition, cites Heaton Co. *v.* Eureka Co., 77 Fed. Rep., 288.

This case cited has nothing to do with the case at bar, and involves a very different proposition by reason of the different state of facts. It is doubtless cited, because the decision refers, among other things, to Wilson *v.* Simpson, the planing machine case, and to the Morgan Envelope Co., case, which have heretofore been fully considered, and the distinctions pointed out.

It is also respectfully submitted that the cases cited on page 74 of Defendant's Brief, accompanying petition for *certiorari,* of Rupp *v.* Elliott, (131 Fed. Rep., 730), Tubular Co. *v.* O'Brien, (93 Fed. Rep., 200), Cortelyou *v.* Johnson, (145 Fed. Rep., 933), and Edison Electric Light Co. *v.* Peninsular Co., (131 Fed. Rep., 831), have no bearing upon the case at bar.

RE DEFENDANT'S POINT FIVE.

The defendant, in this point, contends (Brief accompanying petition for *certiorari,* p. 76), that the records in suit could have been used on a so-called "mechanical feed" device, and could have been sold for export to foreign countries, and therefore, there would be no infringement.

It is also respectfully submitted, as hereinbefore clearly pointed out (pp. 26 and 27 of this brief), that there were not, at the time of the contempt, and are not now the so-called "mechanical feed" devices in commercial use, upon which the contempt records could have been used. The defendant has utterly failed to prove that there were in commercial use any such mechanical feed devices, upon which said records could have been used, for reproducing purposes. There were and are in use a large number of mechanical feed devices for reproducing sound from *cylindrical records, such as the phonographs and graphophones,* where the cylinder is placed upon a mandrel, but defendant's records could not possibly be used in connection with these mechanical feed devices. There were none, and are none, in commercial use, which could reproduce sound from the contempt records, and the only reproducers in commercial use, in combination with which the contempt records could be used to reproduce sound, were those constructed in accordance with complainants' patent in suit, claims five and thirty-five, and shown by the affidavits of Mr. Haddon (Contempt Rec., p. 23), and Mr. Middleton (Contempt Rec., p. 21), and of these there are many thousands.

It is respectfully submitted that this point of defendant is utterly futile.

As regards records for export, there is no evidence that the defendant made any such sales of the contempt records for this purpose, if it had the right.

The evidence is clear as hereinbefore pointed out, that the contempt records sold to Platz (Contempt Rec., p. 13), and to Thompson (Contempt Rec., p. 18), and some of those sold to Bennett (Contempt Rec., p. 17), were sold with the full knowledge that they were to be used in connection with the reproducer of the complainant. *An intent to contribute to the infringement by the sale of contempt records is therefore clear, and requires no further proof.*

The fact is, also, that the only reproducers in commercial use, with which the contempt records could be used in reproducing sound, were the reproducers made in accordance with complainants' patent, for use in combination with such records.

The case of Cortelyou *v.* Johnson & Co., (145 Fed. Rep., 933), cited on page 78 of Defendant's Brief accompanying petition for *certiorari,* in the part there quoted substantiates complainants' contention in this case, and shows the defendant, in the circumstances of the present case, to be guilty of contributory infringement, as the defendant in this case sold one of the vital elements of the two part combination, with knowledge that it was to be used in combination with the other element of the combination.

RE DEFENDANT'S POINT SIX.

The defendant, by this point, seeks to contend that the complainant, by the sale of the reproducing apparatus of claim thirty-five, implies a license to the purchaser to buy from others a suitable record, where the apparatus was sold without a sound record. (Defendant's Brief, accompanying petition for *certiorari,* p. 81.)

This point has been hereinbefore considered, and it will be unnecessary to discuss again the subject at

length. Suffice it to say that this question is particularly decided in

American Graphophone Co. *v.* Leeds, 87 Fed. Rep., 873;

American Graphophone Co. *v.* Amet, 74 Fed. Rep., 789;

American Graphophone Co. *v.* Hawthorne, *et al.*, 92 Fed. Rep., 516.

Roosevelt v. Western Electric Co., 20 Fed. Rep. 724.

In this latter case, Judge Wallace (U. S. C. C., So. Dist. of N. Y.,) said:

"The case made by the motion papers is this: The complainant's patent is for an improvement in electric batteries consisting of a prism and other elements, and the claims are for the prism, and for various elements in combination with it. The defendant is selling an electric battery which contains the prism in combination with several other elements which are covered by the claims of the patent; having purchased the prisms from complainant, but having obtained the other elements of the battery from other sources.

"If it were true that the prisms are not capable of any use except in combination with the other elements covered by the several claims of the patent, the complainant can nevertheless insist that the purchasers should only be permitted to use them as substitutes for prisms which have been deteriorated or destroyed, or to sell to others. They could be used in this way without infringing the complainant's rights. * * * The motion for an injunction is granted."

See also United Nickel Co. v. California Electrical Works, 25 Fed. Rep. 475.

Thomson-Houston Electric Co. v. Ohio Brass Co., 80 Fed. Rep. 712.

Wallace v. Holmes, 9 Blatch. 65; 29 Fed. Cas. 79; 5 Fish. Pat. Cases, 37.

National Phonograph Co. v. Fletcher (117 Fed, Rep. 149).

This was a case where the defendant took the complainant's sound reproducers for phonographs, which needed no repairs, and returned them with the substitution of parts.

The defendant in this case thus made it possible for the purchasers of the complainant's phonographs and reproducers, to use that which was supplied by the defendant, and which was a part of the patented combination, in connection with, and as a substitute for, that which was sold by the complainant, and which was also part of the patented combination.

So also, in the case at bar, the defendant manufactures and sells and supplies, to the purchasers of complainants' reproducing apparatus and records (the only two elements of the patented combination, and neither of which needed to be repaired), additional records, one of the two elements of the patented combination, to be used by the purchaser of complainants' patented combination, as a substitute for one of the elements of the patented combination.

The law relating to the doctrine of repair is, therefore, inapplicable, or as Judge Thomas stated (p. 152):

> "From the foregoing it is observed that there is no occasion for repairs, and hence the law relating to that subject has no specific application. * * * The modification, SUBSTITUTION, and change of relation of parts, passes the limit of allowable repairs. Reproduction, not restoration, is intended, for there is no occasion for restoration."

So also in the case at bar, as pointed out elsewhere, the purchase of additional records is not for the purpose of the repair or restoration, but for increasing repertory of selections, and to carry out the intended purpose of the complainants, in the manner in which

the reproducers and records of the patented combination are placed upon the market. We have shown that these records are of hard, indestructible material, with a practically unlimited capacity for reproducing the sounds recorded thereon.

On page 64 of the Defendant's Brief, accompanying petition for *certiorari*, Chaffee *v.* Belting Co., 22 How., 217, is cited and quoted, as an alleged authority to justify the defendant in manufacturing and selling the contempt records for use in connection with complainants' reproducer in the combination of claim thirty-five, and to carry out the method of claim five, of the patent in suit, under what counsel for defendant terms the "*right of substitution.*"

This decision in Chaffee *v.* Belting Co., *supra*, is discussed and explained, in connection with the law relating to repairs, by Judge Thomas in National Phonograph Co. *v.* Fletcher (117 Fed. Rep., 149).

Defendant's counsel italicises the latter part of his quotation from this decision in Chaffee *v.* Belting Co., namely:

> "*he may repair it or improve upon it, as he pleases, in the same manner as if dealing with property of any other kind.*"

Judge Thomas, in National Phonograph Co. *v.* Fletcher, *supra*, quotes the same matter, stating that in Chaffee *v.* Belting Co., the Court said that it was true that the Supreme Court stated as thus quoted; but Judge Thomas explained this quotation and said (p. 154).

> "**This decision goes no further than this; that an individual owner may do what he will with a patented machine or article which is his property. * * * What a man may do for his own use, with property made pursuant to a patent, is not what he may do for the purpose of selling as another's patented article.**"

Thus it will be seen, that even if it is admitted, for the purpose of discussion, which we do not, that a purchaser of complainants' reproducer and records, would have the right to make new records, this decision of the Supreme Court in Chaffee *v.* Belting Co., *supra*, as thus explained by Judge Thomas, would not extend that right, if such a right existed, to the defendant to *manufacture and sell* the said disc sound records (an element of the sustained claims), whose office and function is to vibrate and propel the reproducing stylus, as specified in these sustained claims five and thirty-five, of the patent in suit.

And furthermore, this decision of Judge Thomas in National Phonograph Co. *v.* Fletcher, is an authority supporting one of complainants' contentions in this case, namely, that the law relating to the doctrine of repair is not here involved, since no repair is necessary.

NO IMPLIED LICENSE, AS THE REPRODUCING APPARATUS IS NOT THE COMPLETE PATENTED THING.

The general rule which implies a license to use a patented machine for the purposes for which it was intended always presupposes that the *completed* patented thing is embodied in the machine.

If, as in this case, the device, or apparatus sold, **only embodies one element** of the combination, the complete patented article is not sold. In the case at bar there could be no greater implied right to use an infringing record by the sale of a reproducing device than there would be an implied right to make or use a reproducing device by reason of the sale of a record by the complainant.

Robinson on Patents (Vol. 2, Sec. 825,) says:

"The sale of a **complete** article by one who owns a patent," implies a license.

Robinson on Patent also states, at the beginning of the same paragraph (825):

"The sale from which this universal license is implied, must, moreover, be a sale of **the precise article covered by the patent.**"

The reproducing apparatus is an *incomplete* portion of the claim, and is not, therefore, by any means, the precise article, as it lacks the material element of the record in combination.

If one element of the combination is omitted, the thing sold is not a complete patented thing. *It is not the precise article.*

The fact that it is incomplete implies on its face that there is something missing.

The purchaser and the world has notice by the Victor Company's most extensive advertising, that the Victor Company makes and sells the records to be used in combination with the reproducing apparatus.

The sale by the Victor Company of a reproducing apparatus is not an unconditional sale; it is, by the very fact that the record is still required to be purchased by the purchaser, **a conditional sale.**

United Nickel Company v. California Electrical Works, 25 Fed. Rep. 475.

In this case the Court held that the purchase by the defendant of one element of a chemical composition did not imply a license that the defendants could use that element in combination with other elements claimed in the claims in controversy in the patent in suit. The Court said (p. 479):

"The fact that they (the defendants) purchase from authorized agents this solution which

enables them to nickel-plate does not, inferentially or otherwise, authorize them to use it in nickel-plating without obtaining a license to use the invention covered by the other claims. They must also get a license to use the invention covered by the other claims, or they cannot use this without being liable as infringers. Each claim is, in effect, a separate and distinct patent; and the right to use one patent does not carry with it the right to use the others without a further license."

The Price of the Reproducing Apparatus is Merely a Portion of the Patent Profit. The Patent Profit is Divided. A Portion is Acquired from the Reproducing Apparatus and the Balance from the Record.

The Victor Company, in selling one element, only receives the price of that element, and not the price of the complete patented thing. The price is so scaled that the complainant must receive its total profit from the sale of both of the elements, in order to receive the total profit to which it is entitled.

Therefore, the Victor Company never receives its compensation for the complete thing, patented in the claims five and thirty-five, until it receives both the portion of the profit which is attached to the record and the portion of the profit which is attached to the reproducing apparatus.

If the defendant's contention be true, the complainants would have to raise their price of the reproducing apparatus so as to acquire the entire profit of the patent from that one element. This is shown by the affidavits of Mr. Haddon (Contempt Rec., p. 24), and Mr. Middleton (Contempt Rec., p. 23).

Robinson on Patents (Sec. 824, Vol. 2) says:

"This implied license rests upon the principle that the owner of the patented invention having

> once received his recompense for releasing the article from the monopoly, either in its price directly paid to him or in the license fee which he collects from its vendor, he can, therefore, neither limit nor demand compensation for its use; but by the sale delivers it from all the restrictions of the patent and makes it common property like any other personal estate."

It is, therefore, obvious that the underlying theory contended for by the defendant does not pertain in the case at bar, among other reasons, for the reasons:

(1) That the reproducing device sold is not the complete patented thing.

(2) That the owner of the patent only receives a portion of the patent profit from the sale of the reproducing device, and relies upon the sale of the other element of the patented thing for the balance of the patent profit.

(3) That the sale of the reproducing device does not, and cannot, release, therefore, the record, the other element of the combination from the patent monopoly.

(4) That the Victor Company has been making and selling records, for use in combination with the reproducing device, for a number of years, and has so notified its purchasers and the world generally, by extensive advertisement of this fact. The Victor Company derives a large portion of its profit from the patented device from the sale of these records.

(5) That the purchaser of a Victor machine, or reproducing device, almost invariably purchases Victor records with it, which allows him the full enjoyment of the patented combination purchased and the method, and no implied license to make or use infringing records could possibly be inferred.

(6) That the defendant's contention is illogical, among other reasons, for the reason that if the contention were true, the sale of a record by the complainant, the other element of the combination would equally as strongly imply a license to make, or sell, reproducing device.

(7) That there can certainly be no implied right to a third party, such as the defendant company, to manufacture and sell records to purchasers of complainants' reproducing device.

The Purchaser of Complainants' Reproducing Device Has Every Opportunity to Use and Enjoy it in a Legitimate Manner by Purchasing Complainants' Records which it is Ready to Supply.

There can be no serious contention that the purchaser of complainants' reproducing device is restricted in the enjoyment of its use if it cannot use infringing records.

The largest part of the Victor Company's business is devoted to manufacturing and selling disc records for use in connection with its reproducing device, and it has invested many hundreds of thousands of dollars for this purpose.

The Victor Company, for this purpose, employs the best and highest priced talent, for rendering selections from which to produce records, paying as much as a thousand dollars for a single selection, in some cases. It supplies all kinds of selections—records of the voices of great singers, records of famous bands, such as Sousa's, records of melodies and instrumentations, records of comic recitationists, etc., etc.

The Victor Talking Machine Company spends large sums of money yearly in its monthly catalogues, containing long lists of new records each month, and is

perhaps the largest producer of disc talking machine records in the world, and has the reputation of producing the best.

It supplies these records to the public at a reasonable figure, at substantially the same price as these infringers.

All these records of the Victor Talking Mach. ıe Company are made for sale and use in connection and in combination with the reproducing device called for in the combination of claim thirty-five of the patent in suit, to be used according to the method of claim five. It has distributors and dealers all over the United States.

Certainly, therefore, there can be no contention that the purchaser of a reproducing device cannot enjoy to the full the use of the said apparatus, or machine, which he has purchased from the complainant.

The purchaser has always the opportunity to procure additional Victor Records, and thus to enjoy the benefit of his reproducing apparatus to the full; he has also the right to sell his machine to others for similar use.

Further, the complainants have granted licenses under the patent in suit to other companies, who have made and sold disc records in large quantities, which were licensed records, which the purchaser would have the right to enjoy and use in combination with a legitimate reproducer.

Those who are now making infringing records are comparatively few, and the only effect upon the purchaser of a legitimate machine, if the complainants' contention is sustained, would be to prevent the defendant from selling him infringing records.

THE DEFENDANT IN SELLING RECORDS INFRINGES THE PROCESS CLAIM.

Westinghouse Electric Mfg. Co. v. Dayton Fan and Motor Co., 106 Fed. Rep. 724.

In this case it was contended that the process patent was susceptible of infringement only by use, and as there was no evidence of use by defendant, there was no infringement. The Court held, that as the purchasers used, the defendant intentionally contributed to the use. Defendant also contended that the claims called for certain elements of combination which they did not make, such as a dynamo circuit and motor, and that as the device as sold by them did not have these they did not infringe. The Court held:

> "There is no evidence to show that it could have any commercial value for any other purpose, and in view of the admissions of the defendant and the absence of any showing whatever to the contrary, it must be regarded as an established fact that it was sold for the purposes of this combination bringing it within the ruling of Thomson-Houston Electric Co. *v.* Ohio Brass Co., 80 Fed. Rep. 712, where it is held that—
>
> " 'One who makes and sells one element of a patented combination, with the intention and for the purpose of bringing about its use in such a combination, is guilty of contributory infringement, and is equally liable with him who in fact organizes the complete combination.' "

If Defendant Can Sell One Element of the Combination, Another Defendant Can Sell the Other, and the Decision of Court of Appeals Nullified.

It should require no argument to convince that a patentee is entitled, under the statute, to the monopoly of manufacturing and selling the whole combination going to make up his patented device.

If the defendants acts are lawful, the patentee would be only entitled to the monopoly of making and selling parts which constitute half, or a fraction, of the patented structure.

Again, which half of the patented structure would the patentee have the monopoly on, if not upon the whole?

If a party, not the patentee, has a right, without license, to make one-half of the patented structure, which half, or portion, is he entitled to make?

If a party, not the patentee, is entitled to make one-half of the patented structure, why would not some other party, not the patentee, be entitled to make the other half of the patented structure?

The position of the defendant is practically reduced to this proposition, for if defendant's counsel's argument be good, the defendant would be entitled without liability, to make the sound record forming one element of claim thirty-five, and another company, by the same course of reasoning, could not be precluded from making the other part, viz. the reproducing apparatus, with the stylus shaped for engagement with the record, mounted to be used in connection with the traveling tablet, and free to be vbrated and propelled by it.

If the one proposition be true, the other proposition should be true, and between the two defendants the patentee would have nothing.

They could also thus use themethod of claim five.

In the case of Strobridge *v.* Lindsay, 6 Fed. Rep. 510, Judge Acheson, of the Third Circuit, said in considering the question of the right of the defendant to evade a patent by dividing the patented device into two parts:

> "Truly the plaintiff's success was a barren victory, if by such an alteration as the one here adopted the injunction of this Court can be evaded. But the expedient must fail of its purpose."

NO LICENSE TO MANUFACTURE RECORDS.

Another point upon which defendant's counsel must rely to support his erroneous contention is that the sale of a machine, licenses and empowers anybody, and everyone, to *make* and sell records, for the alleged reason that the complainants, having received for such a machine a certain reasonable price, it is not entitled to make a separate charge for a record.

The defendant's contention is in effect that because the Victor Company made and sold these reproducers, anybody and everybody would be licensed to start up factories to manufacture these sound records and to sell them without restraint. Defendant's counsel appears to overlook the fact that Judge Hazel, in the Circuit Court for the Southern District of New York, (Inj. Rec., p. 63) and the Circuit Court of Appeals, for the Second Circuit, (Inj. Rec., p. 73) has held that these claims five and thirty-five were broad and basic claims, and that the record was an essential part of the claim, and that *under the decrees and injunctions the unlicensed manufacture or sale of a record of the patent in suit would be a contempt.*

The sale alone of the reproducing device by the complainants can imply no license to the purchaser to manufacture or sell records, the other and equally important part of these claims.

The authorities on contributory infringement referred to elsewhere are conclusive upon the point that the manufacture or sale of one element of a patented combination, with the intention that it shall be used with the other elements thereof, is an infringement. This case is in no manner different from the other cases where the complainant is engaged in selling both elements of the combination, and this case does not become different from the other cases as to contributory infringement because it happens to be a talking machine

composed of a reproducer and a record, instead of some of the other machines, or devices, referred to in the decisions.

The case of Travers *v.* Beyer, *et al.*, 26 Fed. Rep. 450, is a case in point, and supports the complainants' contention. This is an opinion by Judge Wallace, in the Southern District of New York, where the claim of the patent sued on, read:

> "The combination of a hammock, A, having suspension ropes, *f*, *f*, with detachable distending blocks, *g*, *g*, which are notched at their lower edge to space said ropes, *f*, *f*, substantially as specified."

In this case the defendants did not make or sell hammocks, but merely manufactured the blocks and sold them to dealers in hammocks, and were adjudged infringers. The Court held that the blocks were of no practical utility or value except for the special purpose of the patentee. And so in the case at bar, these records are of no value, and are incapable of any use, except when combined with a reproducer as set forth in claims five and thirty-five.

RE DEFENDANT'S POINT SEVEN.

The defendant, in this point, contends that an intolerable burden has been placed upon defendant's alleged right to make and sell the disc records forming a part of the combination of claim 35. (Defendant's Brief accompanying the petition for *certiorari*, p. 85).

Defendant seems to think that the Court below has imposed a burden, because Judge Lacombe comments upon the fact that the defendant did not, until after the motion, make any effort to resrict the use of the contempt records, by putting a notice thereon, regarding the limitation of their legitimate uses, and stated:

"such notice might fairly go further and advise the purchasers that to use it on one of complainant's machines would make the user an infringer."

Defendant's said Brief states that, since the finding in contempt, it has placed upon its records a label, quoted on pages 85 and 86 of Defendant's said Brief, which reads as follows:

"This record is sold for use on all mechanical feed-device machines and upon all licensed Victor, Columbia and Zonophone machines and all other machines licensed under U. S. patent No. 534,543 in replacement of any worn out or broken record thereof. Any other use of this record will be a violation of the conditions under which it is sold and an infringement."

Instead of being in conformity with Judge Lacombe's decision, this label is diametrically the opposite.

It states that these records on which it appears (alleged to have been sold since the contempt order) are sold to be used in connection with the complainants' reproducer of claim 35, and those of its licensees.

This is a most peculiar proceeding, and is apparently an abuse of the Court's order, staying the injunction.

The defendant attempts, to justify it on the ground that the injunction was stayed, pending appeal, and that, therefore, it had the right to make this statement.

This statement, contained on these defendant's records, said to have been put out since the contempt order, is, we submit, in direct violation of the decision of Judge Lacombe in the contempt, **and is a second contempt in itself.**

Many of these records will probably remain in the hands of dealers after Judge Lacombe's contempt order has been sustained by this Court, if it shall be sustained, and create great confusion in the trade, be-

ing a notice of an alleged right, which, under these circumstances, would not exist.

It is a responsibility which the defendant has assumed with its eyes open, and for which it should be punished.

Judge Lacombe did not hold that the defendant *must* label its goods, as the defendant seems to intimate, but evidently regarded the fact that it did not label them with the statement that they were to be used only in connection with mechanical feed machines, until after the contempt proceedings, as suggestive.

The label which the defendant had then prepared to put on is contained on page 82 of the Contempt Record, and states, *inter alia*,

"it is sold for use on mechanical feed machines."

This label, however, was not put on the contempt records, and if it ever was put on any of the defendant's records, it was not placed upon them until after the contempt order. It is this label to which Judge Lacombe referred.

It will also be noted that this label states:

> "This record is made from the very finest material **and can be played many times without deterioration.**"

This statement appears to negative the affidavits of defendant, of E. F. Leeds (Contempt Rec., p. 38), Bunker (Contempt Rec., p. 61) and Moeller (Contempt Rec., p. 67), relative to durability.

As before pointed out, so-called, "mechanical feed" machines, upon which these records are said to be usable, and are not, and never have been, in commercial use.

The case of Welsbach Light Co. *v.* Union Incandescent Light Co. (101) Fed. Rep. 131), cited on page 88 of Defendant's Brief accompanying petition for *certiorari*, would appear to have no application to the case at bar.

RE DEFENDANT'S POINT EIGHT.

The defendant here contends that the question raised upon the motion to punish for contempt was an entirely new question, and that the sale of the contempt records was not included in the preliminary injunction or decree.

As hereinbefore pointed out, it is respectfully submitted that the decree, as well as the preliminary injunction, was as broad as language could make it.

The injunction enjoined the defendant, among other things, from making, selling or using the "reproducing apparatus" specified in the claim, which claim was quoted in the decree. That the words "reproducing apparatus" embodies the record as well as the reproducing stylus is specifically stated in claim 35. The defendant, therefore, was specifically enjoined from making, selling or using "a traveling tablet having a sound record formed thereon"—the disc record—when forming part of the combination with the reproducer of claim 35, or when intended for use in that combination, "And from using or employing in any way the method specified in said Claim 5."

The defendant can hardly, therefore, with any degree of plausibility, contend that the decree did not specifically enjoin it from doing the contempt acts.

There was no new question involved in the contempt proceedings. The question was clearly one which had been before the Courts not only in the motion for preliminary injunction, but also Judge Hazel's opinion in the American Graphophone case (Inj. Rec., p. 63), affirmed by the United States Court of Appeals (Inj. Rec., p. 73), which very clearly shows that the disc record, such as sold by the defendant after the injunction, was a most material and substantial part of the combination.

If, therefore, as shown by complainants' motion

papers, the defendant sold these contempt records for use in connection with the complainants' reproducer of claim 35, it manifestly committed a contempt of court in violating the injunction order, which was most clear and explicit.

The defendant contends that the complainants presented no proof that the contempt records were *used* in a combination which infringed. (Defendant's Brief accompanying the petition for *certiorari*, p. 93.)

It is respectfully submitted that the evidence that the defendant sold contempt records to Platz (Contempt Rec., p. 13) and to Thompson (Contempt Rec., p. 18), and some to Bennett (Contempt Rec., p. 17), with the knowledge that they were to be used in combination with complainant's reproducer, in accordance with the method of the patent, is sufficient, as hereinbefore particularly pointed out.

It is also respectfully submitted that the fact that complainants' reproducing device was the only reproducer in use, of which there were hundreds of thousands, with which the contempt records could be used for reproducing sound, as hereinbefore particularly pointed out, would also be sufficient.

As hereinbefore set forth, complainants' counsel has had no opportunity to examine defendant's brief to be filed in this Honorable Court, so that no reference herein has or can be made to said brief, and, in the foregoing, we have endeavored to reply fully to all of the points of defence which the defendant has raised in the court below, in the defendant's brief attached to the petition for writ of *certiorari* herein, assuming that the defendant on this appeal will raise substantially the same points. However, with especial reference to the decision of the United States Circuit Court of Appeals, holding the defendant in contempt, and the dissenting opinion of Judge Wallace, we desire to answer and consider the defendant's points particularly in con-

nection with this question as they were raised in the defendant's petition for the writ of *certiorari* herein, at perhaps the risk of some repetition, for without being able to examine the said defendant's brief to be filed in this Honorable Court, we do not know in just what order or manner the different points will be submitted.

RE JUDGE WALLACE DISSENTING OPINION AND THE DOCTRINE LAID DOWN IN THE MORGAN ENVELOPE CO. CASE.

The main ground upon which the defendant apparently relied in its petition for writ of *certiorari*, is the dissent of Judge Wallace, in the Circuit Court of Appeals in these present contempt proceedings, but it is respectfully submitted that **the error of Judge Wallace's decision lies not so much in his statement of the law as in his misunderstanding of the fundamental durable character of the record disk and the important mechanical function which it has to perform in the combination of the two-element claim.** The decision of this Honorable Court, in the case of Morgan Envelope Co. *v.* Albany Perforated Wrapper Paper Co., 152 U. S. 430, *supra*, is not at variance with the decision of the majority of the court in the present case, but in accord with it, and it is respectfully submitted:

1. That while in the Morgan Envelope Co. case, the defendant's right to sell the roll of **paper to be used up** in the patented combination was admitted, the principles of law laid down in that case substantiate the decisions, in the present case.

2. That the decisions of Judge Lacombe, in the Circuit Court (Contempt Rec., p. 74), and of the majority in the Circuit Court of Appeals, in the present case (Contempt Rec., p. 90), in no manner extend the monopoly of the patent beyond the patented combina-

tion, but merely gives to the owner of the patent the control of the combination of the claim during the life of the patent.

3. That claim 35 of the patent consists of a combination of two elements only—both of which are **vital elements** and of equal importance, viz.: (1) a traveling tablet having a sound record formed thereon, (2) a reproducing stylus shaped for engagement with the record—free to be vibrated and propelled by it. To allow the defendant the right claimed by it to manufacture and sell, without license, the traveling tablet, or sound record, to be used, and intended to be used, in the combination by those who own the reproducing stylus, or other element in the patented combination, and by the method claimed in claim 5, will be to nullify the rights granted under the patent by the government.

4. The reproducing apparatus and the record are each vital elements of the two-part combination. To allow the defendant to make and sell the record, one of the elements, would by the same logic and reasoning, allow another manufacturer to make the reproducer, the only other element for use in the patented combination, and thus entirely destroy the patent right and make the patent a vain thing.

Relative to Judge Wallace's suggestion in his dissenting opinion that claim 5 might be for the function of a machine, but based his dissent upon the assumption that it was a valid claim. (See Complainants' Injunction Brief, pp. 245 to 263.)

The patent in suit h[illegible] been before the United States Circuit Court for the Southern District of New York, and the United States Circuit Court of Appeals, for the Second Circuit, in several suits, among many others, mentioned on pages 48 to 56, in the Injunction Brief, in Case No. 80, October Term, 1908, in this Hon-

orable Court, in which it has been sustained, and perpetual and preliminary injunctions issued, against substantially the same infringing devices, as follows:

United States Circuit Court, Southern District of New York; Victor Talking Machine Company, and United States Gramophone Company *v.* American Graphophone Company. Final hearing on pleadings and proofs. Hazel, D. J. Perpetual injunction granted. (140 Fed. Rep., 860.)

United States Circuit Court of Appeals, Second Circuit; Victor Talking Machine Company, and United States Gramophone Company *v.* American Graphophone Company. Appeal from decision of Hazel, D. J. Unanimously Affirmed. Re-hearing denied. Lacombe, Townsend and Coxe, Circuit Judges, (145 Fed. Rep., 351).

United States Circuit Court, Southern District of New York; Victor Talking Machine Company, and United States Gramophone Company *v.* Leeds & Catlin Co. Motion for preliminary injunction. Townsend, C. J. Motion granted (146 Fed. Rep., 534).

United States Circuit Court of Appeals, Southern District of New York, Victor Talking Machine Company and United States Gramophone Company *v.* Talk-O-Phone Company. Motion for preliminary injunction. Townsend, C. J. Motion granted. (146 Fed. Rep., 534.)

United States Circuit Court of Appeals, Second Circuit; Victor Talking Machine Company and United States Gramophone Company *v.* Leeds & Catlin Company. Appeal from decree entered on opinion of Townsend, C. J., granting preliminary injunction. Wallace, Lacombe and Coxe, Circuit Judges. Decree unanimously affirmed. (148 Fed. Rep., 1022.)

United States Circuit Court of Appeals, Second Circuit; Victor Talking Machine Company, and United States Gramophone Company *v.* Talk-O-Phone Com-

pany. Appeal from decree entered on opinion of Townsend, C. J., granting preliminary injunction. Wallace, Lacombe and Coxe, Circuit Judges. Decree unanimously affirmed. (148 Fed. Rep., 1022.)

The judgment or decree, which it is sought to have reviewed by this writ of *certiorari*, was based on the opinion of the United States Circuit Court of Appeals, for the Second Circuit, filed May 2, 1907 (Contempt Rec. p. 90), in which opinion it was stated after referring to the adjudications of this patent (fol. 136):

> "The claims protected by such adjudications are:
>
> 'a sound reproducing apparatus consisting of (1) a traveling tablet having a sound record formed thereon and (2) a reproducing stylus shaped for engagement with said record and free to be vibrated and propelled by the same, substantially as described,' (No. 35),

and the

> '*Method* of reproducing sounds from a record of the same'

consisting in

> '(1) vibrating a stylus and (2) propelling the same along the record by and in accordance with the said record substantially as described.' (No. 5.)

(the 'record' being identical with the 'traveling tablet' above mentioned)."

The preliminary injunction (Contempt Rec., p. 9), of which violation is charged, restrained the petitioner here (plaintiff in error in the Court below),—

> "from manufacturing, using or selling, until further order of this Court, sound reproducing apparatus or devices embodying the subject matter of claim 35 of the Letters Patent in suit,"

which is the claim first above quoted,

> "And from manufacturing, using or selling, or in any way disposing of apparatus or devices which embody the method specified in Claim 5."

which is the second above quoted claim,

> "And from using or employing in any way the method specified in said Claim 5."

The Sound Record a Most Vital Mechanical Element of the Two Element Combination.

The sound record is a most vital mechanical element of the two-part combination. It is a solid disc of hard material having a spirally disposed sound groove, with the sound waves recorded in the sides thereof in lateral undulations, the groove being even depth. The reproducing stylus, the second element of the combination, is shaped for engagement with the record groove, to be vibrated back and forth by the lateral undulations, in a double cam-like action, as the disc revolves, the record thus imparting to the diaphragm of the reproducer the recorded sound, at the same time, the record groove propels the reproducer through the entire length of the spiral groove, from a point near its periphery to a point near the center. **It is thus seen that this record with the double cam-like groove is a most vital part of the two-element combination, and is the active fundamental and operative mechanical element in which the reproducing stylus—the other element—is designed to be engaged, and without it the reproducing stylus could not be vibrated or propelled.**

That Judge Wallace was manifestly in error in his premise upon which he founded his dissenting opinion is clear when he states (Contempt Rec., p. 94, fol. 144):

> "It (the sound record) is, however, only a subsidiary part of the machine. Its relation to the

> machine proper is analogous to that of the **sheet of paper** in a typewriting machine, or the **stalks of corn** in a corn cutter."

If Judge Wallace's statement were the fact, there would be more ground for the dissent; that this understanding is absolutely unfounded is too clear for argument. Judge Wallace has based his whole decision upon an **erroneous premise** that the disc record or traveling tablet, having the spiral groove of even depth with the lateral undulations for vibrating the stylus point *in a double cam-like action*, was not a vital feature of the patented invention, but was a consumable thing, like a piece of paper to be consumed by a single use, or like stalks of corn to be cut up in a corn cutter.

Judge Wallace has erred, not so much in the application of the law, as in his entire misunderstanding of the fundamental and vital character of this feature of the two part combination. Had he not misunderstood the construction, as found by the majority of the court, he would have decided otherwise, as he states, *inter alia* (Contempt Rec., p. 94, fol. 145):

> "Undoubtedly he (the purchaser of the patented machine) cannot, after his machine has practically ceased to exist for any useful purpose, reconstruct it then by reparation, nor can he then reconstruct it by disorganizing it **and substituting as new parts the dominating and vital features of the patented invention.**"

This Honorable Court will see that the claim 35 of the patent in suit, which has been adjudicated, is or may be termed "**a two-element claim,**" comprising (1) a traveling tablet or record, and (2) a reproducing stylus; the latter being caused to vibrate to reproduce the recorded sounds, and simultaneously therewith to be propelled or traveled across the tablet or record, by and in accordance with the said record, that

is to say, by the spiral sound groove of even depth with lateral undulations in the sides thereof in the face of the record, as hereinbefore particularly pointed out. As set forth on pages 41-42 and 136 to 140 of this brief, **the two elements of the claims in question are equally important**, the record tablet being a most vital and important element of the combination of claim 35, and performing a most vital and important function in the combination of claim 5.

The **contempt** with which the defendant was charged was the sale of the record tablet, one of the two equally important elements of these claims, to be used with the reproducing apparatus manufactured and sold by the complainants, which was the other element of these claims. These sales being made with the knowledge that said record tablets were to be so used, and with the knowledge, as stated in the opinion of the Circuit Court of Appeals, that the (Contempt Rec., p. 91, fol. 138)

> "Leeds & Catlin records were knowingly made by the plaintiff in error to enable the owners of Victor Talking Machines to reproduce such musical pieces as they wished, by the combination of the Leeds & Catlin record with said machines:"

that is to say, the reproducers of the respondents, the other element of these claims.

On page 4, of the petition for *certiorari*, folio 10, defendant states that the complainants' machine or reproducing apparatus "was so constructed that it was intended that the record to be used thereon for the reproduction of sound could and should frequently be replaced and the sound record was of such character that the destruction thereof was certain, within a very limited period of time, if the sound record was used on the machine for the reproduction of sound." As to the **durability of these disc records**, the attention

of this Honorable Court is respectfully requested to the consideration of this feature of the case on pages 22 and 42-48, of this brief.

Furthermore the contention by the defendant that the records are but temporary, perishable and unpatented parts of the patented combination is disposed of by the opinion of the United States Circuit Court of Appeals, for the Second Circuit, in these contempt proceedings, in the following language (Contempt Rec., p. 92, fol. 139):

> "This contention is not supported by the evidence. Disc records are fragile, *i. e.*, brittle and easily broken; but they are *not perishable, i. e.*, subject to decay by their inherent qualities, or consumed by few uses or a single one. Neither are they temporary, *i. e.*, not intended to endure; on the contrary we find them capable of remaining useful for an indefinite period, and believe that they usually last as long as does the vogue of the sounds they record." (Italics ours.)

The next contention of the defendant, on page 4, folio 11, of the petition for *certiorari*, is that the complainants having sold the patented combination without restriction, the purchasers of such patented combinations were entitled to **replace** the record and to purchase such substitute records, a most vital element of the **two-element** combination, from others than the patentee, or his licensee, and that the defendant as a manufacturer has the alleged consequent right to make and sell this most important element, the records—to such purchasers **by the thousand.**

This contention is disposed of by the United States Circuit Court of Appeals, for the Second Circuit, in the following language (Contempt Rec., p. 92, fol. 140):

> "It is further contended that those who purchase the patented combination in question with-

out restriction, have lawful right to provide themselves with unpatented records made by any person whatever, by way of replacement and repair. We perceive no substantial difference in the meaning of these words. To return to use something injured or lost, or to substitute for something defaced or destroyed, another thing substantially identical, is to repair. The right of general repairing has not been questioned; but what plaintiff in error has done is not to mend or better broken or other records, nor even to furnish new records identical with those originally offered by the Victor Company:—but to place upon new discs such other sound records as are thought to command a market, and to induce users of the patented machine *not to replace, but to increase their stock of recorded words and music.*

"The right of repair is measured by the right of the owner of the patented article, and such owner when doing what is above outlined is no more repairing his machine than is one repairing a stereopticon, by changing the pictures therein to suit the whim of the person gazing through it." (Italics ours.)

This phase of the question is treated in this brief on page .

The defendant's next point on page 4, folio 12, of the petition for *certiorari*, criticises the opinion of the Court of Appeals, in holding that the defendant by supplying the record tablet, one and a vital element of the two part combination of the claims, is **guilty of reconstruction,** contending that this holding is in error, and endeavoring to draw an analogy between the facts of this case and that of the Morgan Envelope Co. *v.* Albany Paper Co., 152 U. S., 425.

Lacombe, C. J., in the United States Circuit Court for the Southern District of New York, in these contempt proceedings, disposed of this contention in the following language (Contempt Rec., p. 74):

"Nor is the substitution of these new records, *bought more frequently in order to increase the repertory of tunes than as substitutes for worn-out discs* and wholly unlike the toilet paper in Morgan Envelope case (which was destroyed by a single use), in any legitimate sense 'repairs' (see Davis Electrical Works *v.* El. Light Co., 60 F. R., 276)."

The facts involved in the Morgan Envelope case cannot be considered analogous to this case; this is evident by the statement of this Honorable Court in that case as to "the difficulty of treating the paper as an element of the combination at all."

It is plainly obvious that the record is a **vital element** in the combination of the claims in question, the claims **comprising only two elements.** And it is as manifest that the disc sound record, with the sound record groove therein containing the recorded sound waves, is a necessary element, and **the active element required to produce the sounds in combination with the reproducer.** In construing these claims, it is absolutely essential that the record be considered as an element of the combination. Therefore it is thought that the lack of analogy between the facts involved in the Morgan Envelope case and the case at bar, and the non-applicability of the doctrine of the Morgan Envelope case to the facts of the case at bar, are conclusively shown in the following excerpt from the decision of this Honorable Court, in the Morgan Envelope case:

"To repeat an illustration already put: If a log were an element of a patentable mechanism for sawing such log, it would, upon the construction claimed by the plaintiff, require the purchaser of the sawing device to buy his logs of the patentee of the mechanism, or subject himself to a charge of infringement. **This exhibits not only the impossibility of this construction of the patent, but the difficulty of treating the paper as an element of the combination at all.**"

Thus, we see in the Morgan Envelope case, that this Honorable Court, although the paper was claimed as an element of the combination, found "difficulty" in treating it as such. While in the patent, upon which this suit is founded, it is submitted, it would be impossible to consider the combination without holding the record as a **vital mechanical element thereof.**

This illustration by this Honorable Court, concerning the log and the sawing device, shows conclusively the error of Wallace, C. J., in the dissenting opinion in the court below, where he states, referring to the sound record, one element of this combination (Contempt Rec., p. 94, fol. 144):

> "Its relation to the machine proper (reproducer) is analogous to that of the sheet of paper in a typewriting machine, or the stalks of corn in a corn-cutter."

The sheet of paper, and the stalks of corn, are obviously in the same category with the log of wood referred to in the illustration of this Honorable Court. To compare a log of wood acted upon by a sawing machine; a piece of paper, printed upon by a typewriting machine; or the stalks of corn cut into sections by a corn-cutter; with the sound record of a talking machine, *which is an element that acts upon the reproducer, and produces the sounds,* it is respectfully submitted, conclusively shows the error in the dissenting opinion.

In this brief, on pages 83 to 88, and 95 to 98 and 148, this Morgan Envelope Co. case is considered at length, and the **differences in the facts** controlling the two cases pointed out, and the attention of this Honorable Court is respectfully called to such portions of this brief, in the desire to avoid repetition here. The facts in the Morgan Envelope case are manifestly not analogous to the present case, for the reason, among others, that

in that case, as Judge Lacombe states, the subsbtituted article "was destroyed by a single use" (Contempt Rec., p. 74).

The decision of this Court in Wilson *v.* Simpson, 9 Howe, 109, is considered on pages 88, 91 and 115, of this brief, to which the attention of this Honorable Court is called.

Defendant makes a **false analogy** between the cases of the Morgan Envelope Company, Wilson *v.* Simpson, etc., and the present case. The replacement of the paper in the Morgan Envelope Company, or the knives in Wilson *v.* Simpson, is a far different proposition than the use of different sound records on a talking machine. As the Circuit Court of Appeals has said, as above quoted, these talking machine discs **are not temporary,** but are **"capable of remaining useful for an indefinite period, and believe that they usually last as long as does the vogue of the sounds they record"** (Contempt Rec., p. 92, fol. 139). This is unquestionably true, or, as otherwise stated by Judge Lacombe, these records are **"bought more frequently in order to increase the repertory of tunes, and not as substitutes for worn-out discs"** (Contempt Rec., p. 74). It is the very essence of the device, that a person having a single reproducing apparatus will probably with it make an original purchase from the complainants of a large number of records, and will constantly increase the number as the records containing new selections are issued, as set forth more at length on page 45, of this brief, these records being made of hard, indestructible material, as set forth on pages 45 and 47, of this brief.

These records as shown may be used hundreds of times without any appreciable deterioration and are not to be compared with the *perishable paper* of the Morgan Envelope case, nor with the knives of Wilson

v. Simpson. Their function and use is far different, and the very nature of the use to which the paper and the knives are intended, precludes any idea of an intention that the purchaser would be entitled to replace such element.

Bearing in mind the hard indestructible nature of said records, and the fact that they can be used indefinitely, as held by the Court of Appeals, **and are in fact the means to act upon the reproducer, and to vibrate the stylus and propel it across the face of the record,** the *error of Wallace, C. J.,* in the dissenting opinion, will be apparent. The learned Judge states (in referring to the record), "*It is the thing which is to be operated on by the machine proper*" (Contempt Rec., p. 94, fol. 144). We think we have shown to the contrary, for the reproducing stylus, the other element of this two part combination, is designed and constructed not to operate, but to be operated by said record tablet, the other element, and the **record disc is the thing which operates on the reproducing stylus to impart to it the lateral vibration, and bodily movement across the face of the record.**

We submit, also, that the prominent part which this disc record plays in the combination of the claims of the patent in question (its presence being vital to the operative combination), illustrates the error of Wallace, C. J., in the dissenting opinion, wherein the learned Judge erroneously states, referring to these disc records, "Its relation to the machine proper is analagous to that of the sheet of paper in a typewriting machine" (Contempt Rec., p. 94, fol. 144). A typewriting machine is a complete mechanism, and the piece of paper is only placed therein so that the characters made by pressing the keys can be removed.

A sound reproducer, however, without the record, is a useless piece of mechanism. Without the combi-

nation of the reproducer being operatively combined with the record, nothing exists that would reproduce sound. The record is not placed on the talking machine as a sheet of paper in a typewriter to receive something from the reproducer, but is **a piece of mechanism placed thereon, to act on the reproducer, and is the operative and most vital element of the combination.**

So, also, is there **error in the analogy** in the dissenting opinion by Wallace, C. J., wherein the learned Judge states that the relation of the sound record to the machine or reproducer "is analogous to * * * the **stalks of corn** in a corn-cutter" (Contempt Rec., p. 94, fol. 144). The corn-cutter is obviously a complete and operative mechanism, and passes through the same operation whether or not stalks are fed there through. The stalks are not vital to the mechanical operation of the corn-cutter, nor is the sheet of paper necessary to the mechanical operation of the typewriter. On the other hand, however, **the talking machine disc is absolutely essential and vital to the mechanical operation of the talking machine,** for, without being combined with the reproducer, neither the reproducer nor the record perform any function, nor reproduce sounds.

Therefore, the conclusion drawn on page 5, folio 14, of the petition for *certiorari*, is upon false premise, for although the inventor has arranged his reproducer and his record with the intention that numerous of his records purchased from him by the user will be used from time to time, it is the very essence of the invention that it should be this way, as the constant playing of one selection would hardly be thought of. This is the peculiar nature of this invention; **the change in records is made, not for a repair, but for varying the amusement.**

The records do not wear out. But when an inventor produces a device, such as the paper distributing device in the Morgan Envelope Co. case, or the cutter in the Wilson *v.* Simpson case, we have a different proposition, for in these cases the replacement of the paper, or the knives, is not for amusement, but to repair a part which the inventor obviously intended should be repaired when the invention was made.

In the last contention in the petition for *certiorari*, page 6, folio 17, reference is made to Point Two (p. 60) of petitioner's brief in the Court of Appeals, a copy of which is attached to said petition. This point is treated on pages 114, etc., of this brief.

CONCLUSION.

It is respectfully submitted, as hereinbefore shown, that the decision of the Circuit Court was in accordance with the law and the facts; that the decision of the Circuit Court of Appeals, for the Second Circuit, affirming the decree of the Circuit Court was without error and in conformity with the law and facts; that the dissenting opinion in the Circuit Court of Appeals was in error, mainly in that it was founded upon a misunderstanding and misconception of the facts; and that for the reasons hereinbefore set forth, it is respectfully submitted, that there was no error in the Order of the courts below, finding the defendant in contempt, and that the said Order should be affirmed, with costs to the complainants.

All of which is respectfully submitted,

HORACE PETTIT,
Counsel for Complainants.

December 24th, 1908.

APPENDIX.

A few words are here added relative to Defendant's Point Three (Defendant's Brief, Page 90-94) in order that there may be no misunderstanding by reason of the defendant's statement regarding complainants' position.

Complainants' counsel does not rely in support of his argument herein upon any *overruled* decision of the lower Court, but relies upon the decisions of the Courts of Appeal in all cases where there has been an appeal, as well as upon the decision of the Circuit Court in cases where there has been no appeal, all of which is hereinbefore fully set forth. (Point One, Page 81-114 and Point Two, Page 114-120.)

The decision of the Court of Appeals in the case of Thomson-Houston Company *v.* Kelsey Company, 75 Fed. Rep. 1005, is freely and fully cited and quoted by complainants' counsel in support of complainants' position, particularly on pages 111, 114, 116-119, of complainants' brief. Nowhere in complainants' brief has counsel relied upon the decision of Judge Townsend in the lower Court in this case. Further comment relative to this case seems unnecessary.

In regard to the decision of the Court of Appeals in the case of Shickle, *et. al v.* St. Louis Company, 77 Fed. Rep., 739, referred to by defendant's counsel under Point Three (Defendant's brief, Page 90) as reversing the doctrine on which complainants' argument is founded, it should be here stated that, while complainants' counsel has not referred to this case in this brief heretofore, yet it is desired to here state that the decision of the Court of Appeals in that case is not antagonistic to the doctrine contended for in support of complainants' position, which it is respectfully submitted, will be apparent to this Honorable Court from a careful reading of the decision of the Court of Appeals of the Eighth Circuit in this last mentioned case. The Court of Appeals decided this case upon the doctrine of "repair," likening the facts and applying the principles laid down in Wilson *v.* Simpson, 9 How. 109, which allowed the cutters and knives of the planing machine to be renewed by the purchasers when they were worn out, on the doctrine of repair. It is under-

stood that the defendant's counsel in this present case, does not invoke the doctrine of "repair."

The Court of Appeals in this case of Shickle *v.* St. Louis Car Company, *supra,* however, was particular to state:—

"We would not be understood as deciding that the defendant company has the right to manufacture the knuckles which form a part of complainant's device, and to sell them indiscriminately to all persons who see fit to buy them; for, clearly, such is not the law."

Further: A method claim is also infringed.

In addition to complainants' argument heretofore set forth, regarding contributory infringement of claim 35, the case at bar presents another important feature which differentiates it from the cases cited by the defendant, in that the subject-matter of this suit is not only an apparatus claim which is infringed by the contributory acts of the defendant, but also a *method* claim, which was not the case in the several authorities cited by the defendant.

The defendant in the present case manufactures and sells a sound record, which is one of the essential means or mediums employed in carrying out the method or process of claim 5 of the patent in suit, and can only be used in such a method, which was well known to the defendant.

The complainants, by selling a particular reproducing apparatus of a particular construction, such as is embraced in the apparatus of claim 35, did not, and cannot be presumed to have granted a general license to the purchaser, or to anyone else, such as a manufacturer like the defendant, to use and operate the method of claim 5. The only implied license which the purchaser had was to use that particular machine as constructed, in conjunction with the parts of which it was composed. No license to the purchaser could extend beyond this. Therefore, the defendant, in manufacturing and selling to the public the disc records, which could only be used in carrying out the said method of claim 5, was wilfully and wantonly contributing to the violation of said method claim, in addition to the apparatus claim 35.

The case at bar is, therefore, even stronger than the cases cited by the complainants' counsel in support of his position, and is thus further differentiated from the authorities cited by defendant.

Office Supreme Court, U. S.
FILED.
FEB 11 1908
JAMES H. MCKENNEY,
CLERK.

SUPREME COURT OF THE UNITED STATES

October Term, 1907. Nos. 80 & 81

LEEDS & CATLIN COMPANY

v.

VICTOR TALKING MACHINE COMPANY and UNITED STATES GRAMOPHONE COMPANY.

Petition of Victor Talking Machine Company and United States Gramophone Company, Complainants Below, Herein Referred to as the Respondents, for Additional Security to Indemnify Respondents for Damages and Profits Due to Infringement Accruing During Period of Stay of Decree for Preliminary Injunction; Affidavits in Support Thereof; Notice of Submission of Petition with Proof of Service.

HORACE PETTIT,
Counsel for Respondents,
604 Stephen Girard Building,
Philadelphia, Pa.

International, 236 Chestnut St.

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Supreme Court of the United States.

October Term of 1907. Nos. 307 and 308.

Leeds & Catlin Company,

Petitioner,

v.

Victor Talking Machine Company and United States Gramophone Company.

To

Louis Hicks, Esq.,
Counsel for the Petitioner,
No. 71 Nassau street, New York, N. Y.

Dear Sir:

You will please take notice that on Monday, February 24, 1908, at the opening of court, or as soon thereafter as counsel can be heard, I shall submit to the Honorable Chief Justice and Associate Justices of the Supreme Court of the United States at the court room of the United States Supreme Court, at Washington, District of Columbia, a petition of the Victor Talking Machine Company and United States Gramophone Com-

pany, respondents herein, for additional security by the Leeds & Catlin Company, the petitioner in the above entitled cause, to indemnify respondents for damages and profits due to infringement accruing during period of stay of decree for preliminary injunction and the preliminary injunction.

A copy of the petition and copies of the affidavits of Harry Cobb Kennedy and Louis F. Geissler, Belford G. Royal and Albert C. Middleton in support of said petition, and the exhibits referred to in said petition and affidavits are served upon you herewith.

HORACE PETTIT,
Counsel for Respondents.

Philadelphia, Pa.,
February 8, 1908.

COMMONWEALTH OF PENNSYLVANIA,
COUNTY OF PHILADELPHIA, } *ss.*:

Harry Cobb Kennedy, being duly sworn according to law, deposes and says that he resides at Overbrook, Pennsylvania, and that prior to February 8, 1908, he was of lawful age, and that on February 8, 1908, he served a copy of the foregoing notice and a copy of the attached petition of the Victor Talking Machine Company and United States Gramophone Company for additional security to indemnify respondents for damages and profits due to infringement accruing during the period of stay of decree for preliminary injunction, and the preliminary injunction, and the affidavits of Harry Cobb Kennedy, Louis F. Geissler, Belford G. Royal and Albert C. Middleton in support of said petition, upon Louis Hicks, Esq., of 71 Nassau street, New York, N. Y., by deposit-

ing said copies of said notice, petition and affidavits enclosed within a sealed envelope addressed to Louis F. Hicks, Esq., 71 Nassau street, New York, N. Y., in the registered mail of the United States, at the Post Office in Philadelphia, Pennsylvania, and received for the same, United States Post Office Registry Receipt, for letter No. 83,934, which is attached hereto and upon which he has placed his initials and this date, namely, 2/10/08.

HARRY COBB KENNEDY.

Sworn to and subscribed before me this tenth day of February, A. D. 1908.

ALEXANDER PARK,
(SEAL) *Notary Public,*
604 Stephen Girard Bldg.,
Philadelphia.

Commission expires February 6, 1909.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1907. Nos. 307 and 308.

LEEDS & CATLIN COMPANY,
Petitioner,

v.

VICTOR TALKING MACHINE COMPANY AND UNITED STATES GRAMOPHONE COMPANY.

PETITION OF VICTOR TALKING MACHINE COMPANY AND UNITED STATES GRAMOPHONE COMPANY, COMPLAINANTS BELOW, HEREIN REFERRED TO AS THE RESPONDENTS, FOR ADDITIONAL SECURITY TO INDEMNIFY RESPONDENTS FOR DAMAGES AND PROFITS DUE TO INFRINGEMENT ACCRUING DURING PERIOD OF STAY OF DECREE FOR PRELIMINARY INJUNCTION AND THE PRELIMINARY INJUNCTION.

To the Honorable Chief Justice and Associate Justices of the Supreme Court of the United States:

The Victor Talking Machine Company and the United States Gramophone Company hereby petition this Honorable Court, and respectfully show:

First.—This is a patent suit in equity brought to this court on two writs of *certiorari* to the United States Circuit Court of Appeals for the Second Circuit, which court on October 22, 1906, on the appeal of said defendant below, Leeds & Catlin Company, affirmed the decree

for preliminary injunction entered in the Circuit Court of the United States for the Southern District of New York on May 2, 1906, and which court also on May 8, 1907, on the appeal of said defendant below, Leeds & Catlin Company, affirmed the decree made and entered in the said Circuit Court of the United States on January 11, 1907, finding the defendant, Leeds & Catlin Company, in contempt of court for having violated the said writ of preliminary injunction.

Second.—The patent in suit, No. 534,543, issued February 19, 1895, to Emile Berliner, for gramophone, of which only claims 5 and 35 are involved, (T. No. 307, pp. 452-462). As stated in the specification of said patent the invention therein patented "has reference to improvements in the method of and apparatus for recording and reproducing sounds," and the reproducing apparatus therein shown, described and claimed, is adapted to reproduce sounds from a record thereof formed in a flat disc of hard material in which the stylus, or needle, connected with a suitable diaphram is free to be vibrated and propelled by and in accordance with the sound record. The particular sound record, or traveling tablet, described in said letters patent, is a flat disc of hard material on which the sounds are recorded by means of lateral undulations in a groove of substantially even depth, the sounds being reproduced in a sound box by the vibrations of the stylus, or needle of the reproducing apparatus traveling in the groove. When it is desired to reproduce the sounds recorded on such a record or traveling tablet, the stylus, or needle, is placed in engagement with the outer end of the spiral groove, and the disc is rotated by suitable means. As the disc or sound record rotates, the stylus or needle is vibrated laterally by the undulations in the sides of the groove, thereby reproducing the sounds in the sound box of the repro-

ducing apparatus, and at the same time, the stylus, or needle, is propelled by the said groove, and is carried across the face of this sound record, that is to say, it operates according to the method claimed in claim 5 of said patent, which reads, as follows:

> "5. The method of reproducing sounds from a record of the same which consists in vibrating a stylus and propelling the same along the record by and in accordance with the said record, substantially as described."

Claim 35 of said patent is for apparatus, and reads as follows:

> "35. In a sound reproducing apparatus consisting of a travelling tablet having a sound record formed thereon and a reproducing stylus shaped for engagement with said record and free to be vibrated and propelled by the same, substantially as described."

These claims have been held to be good and valid in several suits before the Circuit Court of the United States for the Southern District of New York, and by the Circuit Court of Appeals for the Second Circuit, in these cases (T. No. 307, p. 546), and in the case of Victor Talking Machine Co., *et al. v.* the American Graphophone Co. (T. No. 307, p. 73), in which latter case the opinion of the said Circuit Court of Appeals being found in 145 Fed. Rep., p. 351.

The contempt proceedings, above referred to, and which are now before this Honorable Court, case No. 308, were founded on the contention of these respondents, complainants below, that the said defendant below, Leeds & Catlin Company had violated said writ of preliminary injunction by making, using and selling a traveling tablet having a sound record thereon, the first element of said claim 35, for use in connection with the reproducing stylus the other element of the said

claim 35. There was no dispute in the courts below in said contempt proceedings that the said defendant below, Leeds & Catlin Company had, after the service upon it of said writ of preliminary injunction, made and sold flat disc sound records which were made and sold to be used in connection with the reproducer of the patent in the combination specified in claim 35 and intended to be operated in accordance with the method of claim 5. The courts below have upheld the contention of these respondents, complainants below, that such sales, by the said Leeds & Catlin Company, were contributory infringements and in violation of the injunction. (See decision of Judge LACOMBE in Circuit Court (T. No. 308, p. 74), and decision of United States Circuit Court of Appeals, Second Circuit (T. 308, p. 90). Under the order granted in the court below, the decree for preliminary injunction and the preliminary injunction were stayed, and the said defendant below, Leeds & Catlin Company, has continued, and still continues, the sale of said sound records for said use.

Third.—On May 13, 1907, the said defendant below, Leeds & Catlin Company, presented its petitions to this Honorable Supreme Court of the United States praying for the grants of the said writs of *certiorari* to review the said decree for an injunction of the said United States Circuit Court of Appeals, and also to review the said judgment of the said United States Circuit Court of Appeals, finding the said Leeds & Catlin Company in contempt, and that said petitions for said writs of *certiorari* were on May 27, 1907, granted by this Honorable Supreme Court of the United States, and on May 28, 1907, the said writs of *certiorari* were issued to the said United States Circuit Court of Appeals, and the returns upon the said writs of *certiorari* have been made to this Honorable Supreme Court of the United States, and the cases dock-

eted on the calendar of this Honorable Supreme Court bearing Nos. 307 and 308 of the October Term, 1907, respectively. The said cases have not as yet been reached on the calendar of this Honorable Supreme Court of the United States for argument, and although it is possible that said cases may be reached at the present term of this Honorable Court, it now seems proable that neither of the said cases will be reached for argument before the October, 1908, Term of court.

Fourth.—That the issuance of the said writ of preliminary injunction was stayed pending appeal from said decree granting preliminary injunction, and the defendant, the Leeds & Catlin Company, was required to file a bond in the sum of $10,000 to indemnify the respondents herein for damages and profits due to infringement accruing during the period of stay of said preliminary injunction under the order of Judge Townsend of May 2, 1906. (T. No. 307, p. 330.) This bond was filed May 8, 1906, a copy of which is annexed to this petition and made a part thereof, being marked "Exhibit A," and to distinguish this bond from the later bond for $10,000 filed in this suit by the said defendant, the Leeds & Catlin Company in the contempt proceedings, it will hereafter be referred to as "Preliminary Injunction Bond."

Fifth.—That on appeal to the United States Circuit Court of Appeals, for the Second Circuit, the said decree of the court below, of May 2, 1906, granting preliminary injunction, was affirmed (T. No. 307, p. 546), and in conformity with the order of the said United States Circuit Court of Appeals for the Second Circuit, a mandate issued affirming the said decree of the Court below, and was filed in said United States Circuit Court for the Southern District of New York on October 27,

1906, and on the same day a decree in accordance with said mandate was signed and filed.

Sixth.—That on the same day, to wit, October 27, 1906, a writ of preliminary injunction was issued out of said United States Circuit Court for the Southern District of New York (T. No. 308, p. 9), and was duly served by the United States Marshal on October 29, 1906, on the said Leeds & Catlin Company, the defendant below (T. No. 308, p. 9).

Seventh.—That on November 19, 1906, there was issued out of the said United States Circuit Court for the Southern District of New York a rule to show cause why an attachment should not issue against the defendant below, the Leeds & Catlin Company for contempt of Court by reason of violating and disobeying the said preliminary injunction as set forth in paragraph second of this petition (T. No. 308, p. 4), which rule was duly served by the United States Marshal on the said defendant on the same day (T. No. 308, p. 27).

Eighth.—That on January 11, 1907, on the return of the said rule to show cause, it was ordered, adjudged and decreed that the said defendant below, Leeds & Catlin Company, was in contempt of court for having violated the said writ of preliminary injunction so issued and served as aforesaid; and it was further ordered, adjudged and decreed that a fine should be imposed upon said defendant below, Leeds & Catlin Company, in the sum of one thousand dollars ($1000) (T. No. 308, p. 75).

Ninth.—That on January 11, 1907, upon motion of counsel for the defendant below, and upon the filing of security for one thousand dollars ($1000), (T. No. 308, p. 78), the payment of said fine of one thousand dollars

($1000), so imposed, was stayed pending appeal from said order on contempt (T. No. 308, p. 76).

Tenth.—That on January 11, 1907, on motion of counsel for the defendant below for an order staying the decree for preliminary injunction and preliminary injunction theretofore granted and issued, so far as the same had been construed by the court on the said motion for contempt to enjoin and restrain defendant from selling disc sound records for use in the United States upon machines sold by the complainants below, (respondents herein), and their licensees, together with disc sound records, pending an appeal from said order on contempt, it was ordered, adjudged and decreed that said motion of defendant below for said stay be and was granted; provided, that the appeal from said order on contempt be promptly taken and diligently prosecuted; and provided, also, that the said defendant below, Leeds & Catlin Company, within fifteen (15) days from said January 11. 1907, file with the clerk of the said United States Circuit Court for the Southern District of New York, a bond in the sum of ten thousand dollars ($10,000), (Contempt Bond), with sufficient surety, to be approved by said clerk of the court, as security to indemnify the complainants below (respondents herein), for damages and profits due to infringement accruing during the period of said stay of said preliminary injunction; and provided, also, that the said defendant below, Leeds & Catlin Company, should file on the first day of each calendar month, during the period of said stay, and on the last day of said stay, with the clerk of said court, a sworn statement showing the number of infringing devices sold by it during the month, or part of the month, preceding (T. No. 308, p. 77).

Eleventh.—That as these respondents are informed and believe, said defendant below, Leeds & Cat-

lin Company, filed security for one thousand dollars ($1000), for the payment of said fine of $1000 (T. No. 308, p. 78), and filed with the clerk of said court a bond for the amount of ten thousand dollars ($10,000), a copy of which bond is annexed hereto and made a part of this petition and marked "Exhibit B" (Pet., p. 24), and which will be hereafter referred to as "Contempt Bond." In said bond, the said defendant below, Leeds & Catlin Company, as principal, and the National Surety Company as surety, bound themselves to pay to the said complainants below (respondents herein), $10,000 for damages and profits due to infringement of said claims 5 and 35 of the patent in suit during the period of stay of said preliminary injunction due to the granting of said order of January 11, 1907, partially staying the preliminary injunction (T. 308, p. 77) the obligation of the Leeds & Catlin Company and its surety in said bond, being that if said Leeds & Catlin Company failed to make good their appeal by writ of error, they would pay to the complainants below, respondents herein

> "all damages and profits due to infringement of claims 5 and 35 of letters patent to Emile Berliner, No. 534,543, granted February 19, 1895, during the period of said stay."

The payment of said fine was accordingly suspended and the said preliminary injunction was stayed in conformity with said order of January 11, 1907.

Twelfth.—That upon writ of error, the said order holding the said defendant in contempt of court, and so imposing a fine of one thousand dollars ($1000), was taken to the United States Circuit Court of Appeals for the Second Circuit for review, and in an opinion filed May 2, 1907 (T. No. 308, p. 90), the said order of the United States Circuit Court for the Southern District of New York, holding the Leeds & Catlin Com-

pany for contempt of court, and so imposing said fine, was affirmed, and on May 8, 1907, an order of affirmance by said United States Circuit Court of Appeals for Second Circuit was signed and filed (T. No. 308, p. 96).

Thirteenth.—That on May 8, 1907, upon the motion of the defendant below, the Leeds & Catlin Company, the issuance of the mandate affirming the court below, was stayed until May 29, 1907, by an order made and entered on said May 8, 1907, upon the representation of counsel for defendant below, the Leeds & Catlin Company, that a petition would be made to this Honorable Supreme Court of the United States for writ of *certiorari* to review the order holding said defendant below, the Leeds & Catlin Company, in contempt and imposing said fine. A certified copy of said order of May 8, 1907, is attached to the affidavit of Harry Cobb Kennedy in support of this petition, and is marked "Order of May 8, 1907, Staying Issuance of Mandate."

Fourteenth.—That as set forth in paragraph third of this petition, this Honorable Supreme Court of the United States, on May 27, 1907, granted its writs of *certiorari* to review the decrees of the courts below, granting the said preliminary injunction, and holding said defendant below, the Leeds & Catlin Company, in contempt of court for disobedience of said injunction, said writs of *certiorari* being issued on May 28, 1907.

Fifteenth.—These respondents further respectfully show, that the bond of ten thousand dollars ($10,000), Contempt Bond, which was required to be filed by the defendant below, Leeds & Catlin Company, on January 11, 1907, as security to indemnify the complainants below (respondents herein), for damages

and profits due to infringement accruing during the period of stay of the preliminary injunction subsequent to January 11, 1907, the date of the decree in contempt, hereinbefore referred to, was fixed at this amount, provided, among other things, that the appeal from said order on contempt should be promptly taken and diligently prosecuted, and contemplated, therefore, only a probable period of stay of said preliminary injunction until the said writ of error could be heard and determined by the United States Circuit Court of Appeals for the Second Circuit, provided said appeal was promptly taken and diligently prosecuted; that is to say, before the adjournment in May, 1907, of the said United States Circuit Court of Appeals for the Second Circuit of its then October Term, 1906. It did manifestly not contemplate a longer stay, or beyond that which would be determined by the affirmance or reversal of said order holding the Leeds & Catlin Company in contempt at the then October Term, 1906, of the Appellate Court, namely, that said bond of ten thousand dollars ($10,000) (Contempt Bond), should be a security to indemnify the complainants below, (respondents herein) for damages and profits due to the infringement accruing during the period of a stay of about four or five months of the said preliminary injunction, and is inadequate to indemnify the complainants below, for the damages and profits which have accrued during the stay of over twelve months the language of the bond being that the Leeds & Catlin Company and its surety, were obligated to pay to the complainants below

> "all damages and profits due to infringement of claims 5 and 35 of letters patent, to Emile Berliner, No. 534,543, granted February 19, 1895, during the period of said stay."

Sixteenth.—These respondents further respect-

fully show, that as the said appeal from the order of the court below holding defendant below, Leeds & Catlin Company, for contempt, and imposing said fine, was argued on April 9, 1907, before said Unted States Circuit Court of Appeals for the Second Circuit, and on May 2, 1907, as aforesaid, an opinion (T. No. 308, p. 90), was filed by said United States Circuit Court of Appeals for the Second Circuit affirming the said order of the court below on contempt, the period required for the decision of the said United States Circuit Court of Appeals contemplated by Judge LACOMBE when he fixed the amount of the bond at $10,000, was a period of less than four months.

Seventeenth.—These respondents further respectfully show that these cases are numbered 307 and 308 on the calendar of the October Term, 1907, of this Honorable Supreme Court of the United States, and they are informed and believe that, according to the usual and ordinary course of procedure in the argument of cases before this Honorable Court, although they may possibly be called for argument at the present term of this court, it may be October or November, 1908, before these cases shall be called for argument on the calendar of this court, in view of their position on said calendar; that is to say, almost eighteen months subsequent to the termination of the period of stay of said preliminary injunction, which was apparently contemplated by the United States Circuit Court for the Southern District of New York, when requiring a bond of ten thousand dollars ($10,000) (Contempt Bond), to indemnify the complainants below (respondents herein), for the period of the stay of said preliminary injunction. These respondents further show that the period of stay of said preliminary injunction, when taking into consideration the probable time at which these cases may be decided, and until the mandate

of this Honorable Court thereon, should there be an affirmance, will probably be considerably in excess of eighteen months.

Eighteen.—That on a conservative basis, the probable average profit of the said defendant below, Leeds & Catlin Company, upon each of said infringing records sold by it is at least twenty cents. This estimate is made after a careful consideration of the cost of the ingredients which are used in the construction of the said infringing articles, of the cost of manufacturing of the same and the cost of placing the same upon the market, including charges in manufacturer's profit and the making of the original records. The number of the infringing articles sold by the said defendant below, Leeds & Catlin Company, during the period from January 11, 1907, to February 1, 1908, as appears from the monthly sworn statements of the Leeds & Catlin Company, copies of which are annexed to the affidavit of Harry Cobb Kennedy, accompanying this petition, is 555,118, and the profits accruing to the said defendant below, Leeds & Catlin Company, from such sales would be at least $111,023.60 and at the same rate to June 1, 1908, would be $146,551.60. These respondents are without any adequate security whatever for the payment to them by the said Leeds & Catlin Company of these profits, should these respondents prevail in said cases Nos. 307 and 308, before this Honorable Court. Furthermore, as stated above, it is possible that the argument of said cases, Nos. 307 and 308, will probably not be heard by this Honorable Court before October or November, 1908, thereby causing a further period during which the said defendant below, Leeds & Catlin Co., may continue to sell the infringing articles. receiving the profits therefrom and for the payment of which to these respondents, should they prevail before this Honorable Court, there is no adequate se-

curity. An approximation of the number of infringing articles which will probably be sold by the said defendant below during this period, from February 1, 1908, to October, 1908, may be fairly arrived at by assuming that the average sales per month will be at least as great a number as the average sales per month during the twelve months last past, which is, approximately, according to the monthly sworn statements of the said defendant below, Leeds & Catlin Company, 44,410, although, as a matter of fact, the filed sworn statements of the monthly sales of the infringing articles show that these sales are increasing. The period from February 1, 1908, to October, 1908, consists of eight months, and the total number of sales during this period would therefore reasonably be not less than 355,280, and the profits derived therefrom by the said Leeds & Catlin Company, would be not less than $71,156.00. This, of course, is not considering the necessary lapse of time which may accrue between the hearing of said cases and the rendering of the decisions thereon.

It is respectfully submitted that the said defendant below, Leeds & Catlin Company, should be required to give additional security to indemnfy your respondents for the *profits* which have accrued since May 8, 1907, to date, as shown, and which will probably accrue, and which may reasonably be estimated to be at least the sum of $182,179.60. The facts herein set forth are fully corroborated by the affidavits hereto attached forming part of this petition, the affidavits of Louis F. Geissler and Belford G. Royal, and A. C. Middleton.

Nineteenth.—That these respondents are being irreparably damaged by the continuance by the said defendant below of its sales of the said infringing articles to the trade and the public generally. These respondents have built up a large and prosperous business which is founded on the reputation which the

goods manufactured by them bear for quality and durability. The sale by the said defendant below of the said infringing articles manufactured by it, not only takes away from these respondents the profits to which they are justly and legally entitled, but also, among other reasons, the said infringing articles manufactured and sold by the said defendant below being of inferior material and quality, and not as durable as the articles made by these respondents, great and irreparable damage and injury is done to the talking machine business of these respondents in general, and to the good will of the said business, and to the market value of the stock of the said respondents, and to their assets in general. An approximation of the amount of *damage* thus being done to these respondents by the said defendant below may be fairly and reasonably stated to be at least the sum of $80,000.00, as set forth in the affidavit of Louis F. Geissler, General Manager, and A. C. Middleton, Secretary of the Victor Talking Machine Company, one of these respondents, which accompanies this petition and is made a part hereof. (Pet. p. 55.)

Twentieth.—At it appears from the above, and from the affidavits filed in support of this petition, a reasonable estimate of the *profits* that have accrued and which will accrue to the Leeds & Catlin Company, the defendant below, from the sale of said infringing articles during the period of stay of said preliminary injunction, until the mandate of this Court thereon, is at least $182,179.60, and as it further appears that a reasonable estimate of the amount of *damage* to which the respondents have been and will be subjected by reason of the infringing acts of the Leeds & Catlin Company, defendant below, is about $80,000.00; and taking into consideration the steady increase in the sales by the Leeds & Catlin Company, defendant below, of the

infringing articles, these respondents respectfully submit that additional security in the sum of at least $200,000.00 should at this time be required of the Leeds & Catlin Company, defendant below.

That these respondents herein are presenting this petition to this Honorable Court at the earliest opportunity therefor. As stated in the affidavit of Harry Cobb Kennedy which forms a part of this petition and is found in (Pet. pp. 29-50), the petitions for the said writs of *certiorari* were granted by this Honorable Court on May 27, 1907, the last day of the October Term, 1906, of this Honorable Court. This Honorable Court next convened in session in October, 1907, and upon advice received from officers of this Honorable Court, it was found impossible to present this petition until printed transcripts of the records of these cases were received from the clerk of this Honorable Court to enable these respondents herein to make proper references thereto, and to make an orderly presentation of this petition to this Honorable Court. As further appears from the said affidavit of Kennedy (Pet. p. 35), the said transcripts of records were not printed and received by the counsel for these respondents herein, until about the middle of December, 1907, and two recesses of this court have occurred in the meantime, and it is respectfully submitted that this petition is diligently presented to this court thereafter.

WHEREFORE, these respondents respectfully petition this Honorable Supreme Court of the United States, for an order requiring the Leeds & Catlin Company, defendant below, to file with the clerk of this Court, or other official as this Court may direct, at a time therein to be stated, additional security in the sum of two hundred thousand dollars ($200,000.00), with sufficient surety to be approved by the clerk of this Court, to indemnify the respondents herein for damages and profits due to infringement accruing during

the period of stay of the said preliminary injunction, from and after the date of the order of affirmance of the decree for contempt in this cause in the United States Circuit Court of Appeals for the Second Circuit, namely, since May 8, 1907.

And your petitioners will ever pray:

VICTOR TALKING MACHINE COMPANY,
By ALBERT C. MIDDLETON,
Secretary.

HORACE PETTIT,
Counsel for Respondents.
604 Stephen Girard Building,
Philadelphia, Pa., February 8, 1908.

COMMONWEALTH OF PENNSYLVANIA, }
COUNTY OF PHILADELPHIA, } *ss.*:

Albert C. Middleton, being duly affirmed, says that he is the secretary of the Victor Talking Machine Company, one of the respondents herein; that he has read the foregoing petition, and knows the contents thereof, and that the same is true according to his knowledge, except as to the matters therein stated to be alleged upon information and belief, and as to those matters he believes it to be true.

ALBERT C. MIDDLETON.

Affirmed to and subscribed
before me this 8th day of
February, 1908.

ALEXANDER PARK,
Notary Public,
Commission expires Feb. 6, 1909,
604 Stephen Girard Bldg.,
Philadelphia.
(SEAL)

ALEXANDER PARK,
Notary Public,
Commission expires Feb. 6, 1909,
604 Stephen Girard Bldg.,
Philadelphia,
(SEAL)

EXHIBIT A.

KNOW ALL MEN BY THESE PRESENTS, That we, LEEDS & CATLIN COMPANY, of No. 53 East 11th Street, in the Borough of Manhattan, City of New York, as principal, and the FEDERAL UNION SURETY COMPANY, a corporation organized under the Laws of the State of Indiana, and lawfully transacting business in the State of New York, and having an office and usual place of business in said State at No. 35 Nassau Street, in the Borough of Manhattan, City of New York, as surety, are held and firmly bound unto VICTOR TALKING MACHINE COMPANY and UNITED STATES GRAMOPHONE COMPANY in the sum of Ten thousand ($10,000) Dollars for the payment of the obligation hereinafter recited, we bind ourselves each of us, our successors and assigns, jointly and severally, firmly by these presnts.

Sealed with our seals and dated this 4th day of May 1906.

WHEREAS on the 2nd day of May, 1906, an order was made by the Honorable William K. Townsend and filed in the United States Circuit Court, Southern District of New York May 2nd, 1906, in a proceeding entitled Victor Talking Machine Company and United States Gramophone Company, Complainants, *vs.* Leeds & Catlin Company, Defendant, in Equity No. 8797, suspending the operation of an injunction against the said defendant until the hearing and determination in due course, of an appeal taken to the U. S. Circuit Court of Appeals as in said order provided.

AND WHEREAS as a condition upon which the opera-

tion of said injunction was suspended a bond was ordered to be filed in the sum of Ten thousand ($10,000) Dollars.

NOW THEREFORE the condition of this obligation is such, that if the said defendant in said action, that is Leeds & Catlin Company, failing to make the said appeal good, shall pay to the complainants, Victor Talking Machine Company and United States Gramophone Company, all damages and profits due to infringement of claims 5 and 35 of Letters Patent to Emile Berliner, No. 534,543, granted February 19th, 1895, during the suspension of said injunction, then this obligation to be void, otherwise to remain in full force and virtue.

L. S.

LEEDS & CATLIN COMPANY,
By E. F. LEEDS,
President.

FEDERAL UNION SURETY COMPANY,
By ROBERT M. NUGENT,
Res. Vice-President.

Attest: F. STEARNS EDICK,
Res. Asst. Secretary.

STATE OF NEW YORK,
COUNTY OF NEW YORK, } *ss.*:

On the 5th day of May, 1906, before me personally came Edward F. Leeds, to me known, who being by me duly sworn did depose and say that he resides in Borough of Brooklyn, New York City; that he is president of the LEEDS & CATLIN COMPANY, the corporation described in and which executed the above instrument; that he knew the seal of said corporation; that the seal

affixed to said instrument is such corporate seal; that it was so affixed by order of the Board of Directors of said corporation, and that he signed his name thereto by like order.

(NOTARY'S SEAL) LOUIS HARTMANN,
Notary Public for West Chester Co.
Certificate filed in New York Co.

FORM OF AFFIDAVIT, ACKNOWLEDGMENT, AND JUSTIFICATION BY GUARANTEE OR SURETY COMPANY.

STATE OF NEW YORK, }
COUNTY OF NEW YORK, } *ss.:*

On this fourth day of May, one thousand nine hundrd and six, before me personally came Robert M. Nugent, known to me to be the resident vice-president of the Federal Union Surety Company, the corporation described in and which executed the annexed bond of Leeds & Catlin Company as surety thereon, and who, being by me duly sworn, deposes and says that he resides in the City of New York, State of New York; that he is the resident vice-president of said company, and knows the corporate seal thereof; that said Federal Union Surety Company is duly and legally incorporated under the laws of the State of Indiana; that said company has complied with the provisions of the Act of Congress of August 13, 1894, allowing certain corporations to be accepted as surety on bonds; that the seal affixed to the annexed bond (Form) of Leeds & Catlin Company is the corporate seal of said company, and was thereto affixed by order and authority of the board of directors of said company; and that he signed his name thereto by like order and authority as resident vice-president of said company; and that he is acquainted with F. Stearns Edick and knows him to be the resident assistant secretary of said company, and

that the signature of said F. Stearn Edick subscribed to said bond is the genuine handwriting of said F. Stearns Edick and was thereto subscribed by order and authority of said board of directors, and in the presence of said deponent; and that the assets of said company, unincumbered and liable to execution, exceed its claims, debts and liabilities of every nature whatsoever, by more than the sum of two hunderd and fifty thousand dollars. Robert M. Nugent, of New York City, New York, is attorney for service of process in the district for which this bond is given.

ROBERT M. NUGENT.

Sworn to, acknowledged before me and subscribed in my presence this fourth day of May, 1906.

L. S. CATHRYN F. ASPELL,
Notary Public,
New York Co.

Cert. filed in Kings, Queens, Suffolk, Richmond and Westchester Counties.

(Endorsed: U. S. Circuit Court, Southern District of New York—Victor Talking Machine Company and United States Gramophone Company, complainants, against Leeds & Catlin Company, defendant. Bond suspending injunction surety: Federal Union Surety Company. Filed May 8, 1906. Approved as to form and also as to sufficiency of sureties, with reservation, however, to the complainants of the right at any time to examine the proper officers of the Surety Company under oath, touching its assets, liabilities and financial condition generally. John A. Shields, clerk Circuit Court of the United States for the Southern District of New York.)

EXHIBIT B.

CIRCUIT COURT OF THE UNITED STATES,
SOUTHERN DISTRICT OF NEW YORK.

No. 8797, on Patent No. 534,543.

IN EQUITY.

ALEXANDER PARK.
Notary Public,
Commission expires Feb. 6, 1909.
604 Stephen Girard Bldg.,
Philadelphia.
(SEAL)

Victor Talking Machine Company and United States Gramophone Company,

Complainants,

v.

Leeds & Catlin Company,

Defendant.

KNOW ALL MEN BY THESE PRESENTS:

That we, the LEEDS & CATLIN COMPANY, of 53 East 11th Street, in the Borough of Manhattan, City of New York, as principal, and NATIONAL SURETY COMPANY having an office and place of business at No. 62 Liberty Street, Borough of Manhattan, City of New York, as surety are held and firmly bound unto Victor Talking Machine Company and United States Gramophone Company in the sum of Ten Thousand Dollars ($10,000.), lawful money of the United States of America to the payment of which, well and truly to be made, the said principal and the said surety bind themselves, their and each of their successors and assigns jointly and severally firmly by these presents.

SEALED WITH OUR SEALS and dated this 24th day of January, in the year one thousand nine hundred seven.

WHEREAS, on the 11th day of January, 1907, an order was made by the Honorable E. HENRY LACOMBE, one of the judges of the above named court, and filed in the United States Circuit Court for the Southern District of New York on said 11th day of January, 1907, in a proceeding entitled "Victor Talking Machine Company and United States Gramophone Company, complainants, against Leeds & Catlin Company, defendant, in equity No. 8797," partially staying the decree for preliminary injunction and preliminary injunction therefore granted and issued therein against the defendant until the hearing and determination, in due course, of an appeal taken by defendant, as in said order provided, from an order on contempt signed and entered in said cause in the office of the clerk of said court on the 11th day of January, 1907; and

WHEREAS, as a condition upon which said decree for preliminary injunction and preliminary injunction were partially stayed, as aforesaid, a bond was ordered to be filed in the sum of Ten Thousand Dollars ($10,000.),

NOW, THEREFORE, the condition of this obligation is such that if the defendant in the said action, that is, Leeds & Catlin Company, failing to make the said appeal by writ of error good, shall pay to the complainants, Victor Talking Machine Company and United States Gramophone Company, all damages and profits due to infringement of claims 5 and 35 of letters patent to Emile Berliner, No. 534,543, granted February 19, 1895, during the period of said stay, then

this obligation to be void, otherwise, to remain in full force and virtue, such damages and profits, however, not to exceed Ten Thousand Dollars, ($10,000).

Attest:
HENRY LEEDS,
Asst. Secretary.

(Seal;
Leeds & Catlin Company;
Incorporated 1899; New
York.)

LEEDS & CATLIN COMPANY,
By E. F. LEEDS, *Pres.*
NATIONAL SURETY COMPANY,
By JOEL RATHBONE,
4th Vice-President,
Attest: JOHN HOLMES,
Res. Asst. Secretary.

(Seal;
National Surety
Company; Incor-
porated 1899; New
York.)

STATE AND COUNTY OF NEW YORK, *ss.:*

On this 24th day of January, 1907, before me personally came EDWARD F. LEEDS, to me known, who being by me duly sworn, did depose and say, that he resides in the Borough of Brooklyn, County of Kings, City and State of New York; that he is the president of Leeds & Catlin Company, the corporation described in and which executed the above instrument or bond; that he knew the seal of said corporation; that the seal affixed to said instrument is such corporate seal; that it was so affixed by order of the Board of Directors, and that he signed his name thereto by like order.

LOUIS HARTMANN,
(Notary's Seal) *Notary Public,*
Westchester Co.
Certificate filed in New York Co.

AFFIDAVIT, ACKNOWLEDGMENT AND JUSTIFICATION BY GUARANTEE OR SURETY COMPANY.

STATE OF NEW YORK,
COUNTY OF NEW YORK, } *ss.:*

On this 24th day of January, one thousand nine hundred and seven, before me personally came Joel Rathbone, known to me to be the 4th vice-president, of the NATIONAL SURETY COMPANY, the corporation described in and which executed the within and foregoing bond of Victor Talking Machine Co. and ano. vs. Leeds & Catlin Company, as a surety thereon, and who, being by me duly sworn, did depose and say that he resides in the City of New York, State of New York; that he is the 4th vice-president of said company, and knows the corporate seal thereof; that the said NATIONAL SURETY COMPANY is duly and legally incorporated under the laws of the State of New York; that said company has complied with the provisions of the Act of Congress of August 13th, 1894; that the seal affixed to the within bond of Victor Talking Machine Co. and ano. vs. Leeds & Catlin Company, is the corporate seal of said company, and was thereto affixed by order and authority of the Board of Directors of said company, and that he signed his name thereto by like order and authority as 4th vice-president of said company, and that he is acquainted with John Holmes and knows him to be the Res. Asst. Secretary, of said company; and that the signature of said John Holmes, subscribed to said bond is in the genuine handwriting of said John Holmes, and was thereto subscribed by order and authority of Directors, and in the presence of said deponent: and that the assets of said company, unencumbered and liable to execution, exceed its debts and

liabilities of every nature whatsoever, by more than the sum of ONE MILLION ($1,000,000.) dollars.

That is our agent to acknowledge service in the Judicial District wherein this bond is given.

JOEL RATHBONE,
(*Deponent's Signature*).

Sworn to, acknowledged before me, and subscribed in my presence this 24th day of January, 1907.

PHILIP B. INGRAHAM
Notary Public.
For the County of N. Y., No. 18.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1907. Nos. 307 and 308.

Leeds & Catlin Company,

Petitioner,

v.

Victor Talking Machine Company and United States Gramophone Company.

AFFIDAVIT OF HARRY COBB KENNEDY, *sur* PETITION OF VICTOR TALKING MACHINE COMPANY AND UNITED STATES GRAMOPHONE COMPANY, COMPLAINANTS BELOW, HEREIN REFERRED TO AS THE RESPONDENTS, FOR ADDITIONAL SECURITY TO INDEMNIFY RESPONDENTS FOR DAMAGES AND PROFITS DUE TO INFRINGEMENT ACCRUING DURING PERIOD OF STAY OF DECREE FOR PRELIMINARY INJUNCTION AND THE PRELIMINARY INJUNCTION.

COMMONWEALTH OF PENNSYLVANIA, }
COUNTY OF PHILADELPHIA, } *ss.*:

HARRY COBB KENNEDY, of Overbrook, Pennsylvania, being duly sworn according to law, deposes and says, as follows:

I am a member of the bar and an assistant to Horace Pettit, Esquire, of Philadelphia, Pennsylvania, solicitor and of counsel for the respondents above named, and am familiar with the proceedings in this suit in the United States Circuit Court of Appeals for the Second Circuit, and the United States Circuit Court

for the Southern District of New York. I have read the foregoing petition of these respondents for additional security, in the amount of two hundred thousand dollars ($200,000.00), and corroborate the statements made in said petition as to the proceedings in this suit in the courts below, and state to the best of my knowledge and belief and understanding of the proceedings therein, that such proceedings were had, as are stated in said petition, as is shown by the transcript of the record, certified to this Court in this cause, and in the transcripts in this court.

On May 2, 1906, on motion of the complainants below, a decree for preliminary injunction against the said defendant below, Leeds & Catlin Company, was entered in the Circuit Court of the United States for the Southern District of New York (T. No. 307, p. 328), and upon the filing of a bond for $10,000 by the said Leeds & Catlin Company, which is referred to in the accompanying petition as Preliminary Injunction Bond the issuance of the said preliminary injunction was stayed pending an appeal from the said decree for preliminary injunction, as provided in an order staying said injunction (T. No. 307, p. 330). The defendant below, Leeds & Catlin Company, took an appeal to the United States Circuit Court of Appeals for the Second Circuit from the said decree of May 2, 1906, and on October 22, 1906, an order of affirmance of the said decree was entered in the said Circuit Court of Appeals, pursuant to the opinion handed down by the said Appellate Court (T. No. 307, p. 546). A mandate to the Court below, United States Circuit Court for the Southern District of New York, was duly issued and filed on the said October 22, 1906, and pursuant thereto a writ of preliminary injunction against the defendant below was ordered and served upon the said defendant below on October 29, 1906 (T. No. 308, p. 9).

On the 30th day of November, 1906, argument was heard before Judge LACOMBE of the Circuit Court of the

United States on the return of a rule to show cause (T. No. 308, p. 4) obtained by the respondents herein, why the said defendant below, Leeds & Catlin Company, should not be punished for contempt of court by reason of the disobedience of the said writ of preliminary injunction by continuing, in defiance of said preliminary injunction to manufacture and sell the disc records, one of the two elements, of the sustained claims 5 and 35, of the patent in suit; and on January 5, 1907, an opinion was handed down by Judge LACOMBE finding the said defendant below, Leeds & Catlin Company, in contempt, and imposing a fine of $1,000, collection to be suspended pending appeal (T. No. 308, p. 74).

At the settlement of the decrees and orders, on January 11, 1907, pursuant to the said opinion of Judge LACOMBE in said contempt proceedings, an order was first signed by Judge LACOMBE holding the Leeds & Catlin Company in contempt for having violated the preliminary injunction, and imposing a fine of one thousand dollars ($1,000), one-half to the United States, and one-half to the complainants below (respondents herein) (T. 308, p. 75). Upon motion of counsel for defendant below, the payment of said fine of one thousand dollars ($1,000), was stayed, pending appeal from said order on contempt, provided the Leeds & Catlin Company should, within fifteen (15) days, file, with the clerk of the court, security for the payment of said fine when due; which security, as I understand was duly filed, and the payment of said fine stayed (T. No. 308, p. 76).

At the same time, namely, on January 11, 1907, motion by counsel for defendant below was made to stay the decree for preliminary injunction, and the preliminary injunction theretofore issued, pending appeal from said order on contempt, which motion was granted by Judge LACOMBE, as follows (T. No. 308, p. 77):

"Ordered, adjudged and decreed that defendant's said motion for said above mentioned stay be, and the same hereby is, granted; provided that the appeal from said order on contempt shall be promptly taken and diligently prosecuted; and provided, also, that defendant shall, within fifteen days from the filing of this order, file with the clerk of this Court a bond in the sum of ten thousand dollars ($10,000), with sufficient surety, to be approved by the clerk of this Court, as security to indemnify complainants for damages and profits due to infringement accruing during the period of said stay; and provided also that defendant shall, on the first day of each calendar month during the period of said stay and on the last day of said stay, file with the clerk of this Court a statement sworn to by one of its officers showing the number of disc sound records sold by it during the month or part of the month preceding the day of the filing thereof."

I am informed and believe that the said bond in the sum of ten thousand dollars ($10,000), was duly filed with the clerk of the court, as provided by said order, a copy of said bond being annexed to the accompanying petition and marked "Exhibit B," and referred to in said petition as Contempt Bond and the preliminary injunction theretofore issued, was stayed.

By writ of error, the said cause was taken to the United States Circuit Court of Appeals for the Second Circuit, and argued therein on April 9, 1907, an opinion being filed on May 2, 1907 (T. No. 308, p. 90), affirming the order holding the defendant in contempt, and on May 8, 1907, an order, in conformity with said opinion, affirming the order holding said defendant in contempt, was made and entered (T. No. 308, p. 96). On the same day, namely, May 8, 1907, on motion of counsel for the defendant below, based upon the representation that petitions were to be presented to the Honorable Supreme Court of the United States on May 13, 1907,

for writs of *certiorari* to the said United States Circuit Court of Appeals, to review the said decree for a preliminary injunction of the said United States Circuit Court of Appeals, and to review the said judgment of the said United States Circuit Court of Appeals, finding the said Leeds & Catlin Company in contempt, and that it was expected that the same would be granted or denied on May 27, 1907, the said United States Circuit Court of Appeals stayed the issuance of the mandate under its said decree until May 29, 1907, a certified copy of said order staying issuance of said mandate is annexed to this affidavit, made a part hereof and marked "Order of May 8, 1907, Staying Issuance of Mandate."

The said petitions for writs of *certiorari* were granted by the Supreme Court of the United States on May 27, 1907, and on May 28, 1907, the said writs of *certiorari* were issued to the said United States Circuit Court of Appeals (T. No. 307, p. 548, and T. No. 308, p. 97), and the returns upon the said writs of *certiorari* have been made to this Honorable Supreme Court of the United States (T. No. 307, p. 549, and T. No. 308, p. 99), and the cases are on the calendar of this Honorable Court bearing numbers 307 and 308 of the October Term, 1907, the transcript of the record of No. 307, being the return upon the writ of *certiorari* to review the decree for a preliminary injunction of the said United States Circuit Court of Appeals, and the transcript of the record in case No. 308 being the return upon the writ of *certiorari* to review the judgment of the said United States Circuit Court of Appeals finding the said Leeds & Catlin Company in contempt. I am informed and believe that in the ordinary course of procedure of this Honorable Court, by reason of the position of the said cases on said calendar, although it is possible that said cases may be reached for argu-

ment near the conclusion of the present October, 1907, Term of this Honorable Court, they will probably not be called for argument before October, 1908.

The Honorable Judge LACOMBE, in the United States Circuit Court for the Southern District of New York, in granting the stay of the preliminary injunction, on January 11, 1907, pending appeal, fixed the amount of the Preliminary Injunction Bond, to be filed by the defendant below, at ten thousand dollars ($10,000), as security to indemnify the complanants for damages and profits due to infringement accruing during the period of said stay, that being one of the conditions upon which the stay was granted. Another condition was "that the appeal from said order on contempt shall be promptly taken and diligently prosecuted" (T. No. 308, p. 77). The said Preliminary Injunction Bond was duly filed, its condition being to indemnify the complainants below for "all damages and profits due to infringement of claims 5 and 35, of letters patent to Emile Berliner, No. 534,543, granted February 19, 1895, during the period of said stay" of the preliminary injunction. There is one term each year in the United States Circuit Court of Appeals for the Second Circuit, beginning in October, and usually ending in May of the following year, during which term, sessions are held at certain intervals. On January 11, 1907, there were to be held several sessions of the said United States Circuit Court of Appeals for the Second Circuit before its adjournment in May, 1907, and, under the rules of practice of said court, the said appeal could be and was brought on for argument before the end of that term. Such argument at said term was had, and, therefore, it would appear to be certain that while Judge LACOMBE intended that said Contempt Bond should be an obligation on the part of the Leeds & Catlin Company, to indemnify the complainants below for damages and profits accruing

during any period stay due to his order partially staying said preliminary injunction, yet the period of stay of said preliminary injunction contemplated by the Honorable Judge LACOMBE, pending appeal to the United States Circuit Court of Appeals for the Second Circuit, was only a stay from January 11, 1907, to such time as said cause might be argued during said October, 1906, term of said court, and decided; and in fact, said appeal from said order on contempt was taken and perfected, and argued on April 9, 1907, and an opinion filed May 2, 1907 (T. No. 308, p. 90), and the order of affirmance was dated May 8, 1907 (T. No. 308, p. 96). Thus it would appear that a period of about four months was contemplated by Judge LACOMBE in granting said stay of the preliminary injunction, and it would further appear, that the bond of ten thousand dollars ($10,000), Contempt Bond, which the Honorable Judge LACOMBE ordered filed, as a condition precedent to the stay of said injunction, was to be security to indemnify the complainants below (respondents herein), for damages and profits due to the infringement accruing during the period of said stay, that is to say, during a period of about four months, or in other words, that Judge LACOMBE considered that during a period of about four months, the damages and profits would amount to about ten thousand dollars ($10,000).

The period of stay, as appears to have been contemplated by Judge LACOMBE to be covered by said bond of ten thousand dollars ($10,000), Contempt Bond ended on May 8, 1907, and as counsel for respondents had at that time received notices of the petitions for writs of *certiorari*, an application for an increase of bond was not presented while these petitions for writs of *certiorari* were pending before this Honorable Court, and when the petitions were granted on May 27, 1907, the October Term, 1906, of this Honorable Court, terminated, so that application for this bond could not

be presented until this present term, and is now presented at the first convenient opportunity, counsel for respondents having been informed that references to the pages of the printed Transcripts in these cases Nos. 307 and 308, would be necessary in presenting this petition, and these printed Transcripts not having been received until the middle of December, 1907, and two recesses of this Honorable Court having occurred in the meantime.

Another condition upon which the said stay of preliminary injunction was so granted on January 11, 1907, by the Honorable Judge LACOMBE (T. No. 308, p. 77.), was that the defendant below should file on the first day of each month during the period of stay of said preliminary injunction, sworn statements showing the number of infringing articles sold during the preceding month, and, up to and including the first of February, 1908, the monthly statements so filed, copies of which are annexed hereto and marked "Monthly Sworn Statements of Leeds & Catlin Company," (pages 39 to 48 of this petition) and are made a part of this affidavit, show that from January 11, to February 1, 1907, the defendant below sold 31,735 infringing articles; during the month of February, 36,378; during the month of March, 33,802; during the month of April, 32,650; during the month of May, 60,827; during the month of June, 28,380; during the month of July, 39,248; during the month of August, 45,672; during the month of September, 41,520; during the month of October, 49,724; during the month of November, 64,036; during the month of December, 44,236, and during the month of January, 1908, 46,960; a total of 555,118.

These monthly statements show that the sales of the infringing articles are increasing, and that while the number of infringing articles reported to have been sold by the Leeds & Catlin Company during the period

of stay of said preliminary injunction contemplated by said Contempt Bond, for $10,000, namely, from January 11, 1907, to May 8, 1907, is about 150,000, yet the number of said infringing articles reported to have been sold by the Leeds & Catlin Company, during the period of stay of said preliminary injunction, which has already occurred, namely, from May 8, 1907, to February 1, 1908, is about 406,000, over two-and-two-thirds times the amount reported to have been sold during the first period of stay and during which first period of stay Judge LACOMBE apparently contemplated damages and profits to the extent of $10,000. If these cases are not heard by this Honorable Court until October, 1908, as I am informed is possible, a further period of about ten months will probably ensue before the mandate of this Honorable Court issues, and the injunction be restored, should the decision be in favor of these respondents. During this period of ten months from February 1, 1908, just referred to, at the average at which the Leeds & Catlin Company have been selling these infringing articles since the stay of said preliminary injunction, the said Leeds & Catlin Company will have sold, in addition to the 555,118, the still further amount of about 445,000 of said articles, whereas it is reasonably certain that the amount will be in excess of this last named figure, because the filed monthly reports show that the sales are increasing.

I further believe if the decree of the United States Circuit Court for the Second Circuit should be affirmed by this Honorable Court, that in the absence of adequate security, in the form of an obligation by the defendant, the Leeds & Catlin Company, the complainants would have no means of recovering the damages and profits due to infringement of the patent in suit, which have accrued, and will accrue between now and the issuance of the mandate of this Honorable Court, and that except for such security as may be required

by this Honorable Court of the defendant, I believe that the complainants would be unable to recover from the defendant, the latter being a corporation and thus able to distribute profits which it is now making, by reason of the sale of these infringing articles, as to leave nothing tangible to reimburse the complainants. I believe that the defendant is making large profits by the enormous sale of these infringing records, but that these profits can be so distributed as to be beyond the reach of these complainants, unless this court should require additional security, as prayed for in said petition, as the Contempt Bond of ten thousand (10,000) dollars, which was required by the defendant, when it appeared that the injunctions would only be stayed about four months, is manifestly adequate, since the period of stay has now amounted to over twelve months and may be ten months longer. The inadequacy of said Contempt Bond for $10,000, is shown by the large sales of these infringing records as reported by the Monthly Sworn Statements attached hereto, which statements have been filed by the defendant for each month of said stay of preliminary injunction in accordance with the order of Judge LACOMBE granting said stay, and requiring said Contempt Bond for $10,000, and the filing of said Monthly Statements, during the period of stay (T. No. 308, p. 77).

HARRY COBB KENNEDY.

Subscribed and sworn to before me this 8th day of February, 1908.

ALEXANDER PARK,
Notary Public,
Commission expires Feb. 6, 1909.
604 Stephen Girard Bldg.,
Philadelphia.
(SEAL)

"MONTHLY SWORN STATEMENTS OF LEEDS & CATLIN COMPANY."

For January, 1907

CIRCUIT COURT OF THE UNITED STATES,

Southern District of New York.

IN EQUITY.

ALEXANDER PARK,
Notary Public,
Commission expires Feb. 6, 1909,
604 Stephen Girard Bldg.,
Philadelphia,
(SEAL)

No. 8797.

Victor Talking Machine Company and United States Gramophone Company,

Complainants,

v.

Leeds & Catlin Company,

Defendant.

STATE AND COUNTY OF NEW YORK, *ss.*:

EDWARD F. LEEDS, being duly sworn, says that he is president of Leeds & Catlin Company, defendant above named, and that pursuant to the order entered herein January 11, 1907, partially staying the preliminary injunction herein, he makes this affidavit; that during the period of said stay in the month of January, 1907,

defendant sold for use in the United States 31,735 disc sound records, subject, however, to the conditions and restrictions set forth upon the annexed label marked "Exhibit A."

Subscribed and sworn to before me this 1st day of February, 1907. } EDWARD F. LEEDS.

JOSEPH ISAACS,
(SEAL) *Notary Public,*
New York County, No. 6.

EXHIBIT "A."

This record is sold by the manufacturer upon condition that when sold by dealers to the public it must be sold at not less than the regular list price and upon the further condition that the record shall be used only for the reproduction of sound directly from the record. This record is sold for use on all mechanical feed device machines and upon all licensed Victor, Columbia and Zonophone machines and all other machines licensed under U. S. Patent No. 534,543, in replacement of any worn out or broken record thereof. Any other use of this record will be a violation of the conditions under which it is sold and an infringement.

(Endorsed: U. S. Circuit Court, Southern District of New York. Victor Talking Machine Co., *et al.*, Complainants, against Leeds & Catlin Co., defendant. In Equity, No. 8797. AFFIDAVIT OF JANUARY, 1907 Sales. Louis Hicks, Solicitor for Defendant, 71 Nassau St., New York, N. Y. U. S. Circuit Court, Southern District New York, Filed Feb. 1, 1907, John A. Shields, Clerk.)

(Exhibit A, attached to the foregoing statement for January, 1907, is also attached to the following Monthly Statements, except those for December, 1907, and January, 1908.)

STATEMENT FOR FEBRUARY, 1907.

STATE AND COUNTY OF NEW YORK, *ss.*:

HENRY LEEDS, being duly sworn, says that he is treasurer of Leeds & Catlin Company, defendant above named, and that pursuant to the order entered herein January 11, 1907, partially staying the preliminary injunction herein, he makes this affidavit: That during the period of said stay in the month of February, 1907, defendant sold for use in the United States 36,378 disc sound records, subject, however, to the conditions and restrictions set forth upon the annexed label marked "Exhibit A."

HENRY LEEDS,
Treasurer.

Subscribed and sworn to
before me this 1st day
of March, 1907.

LOUIS HARTMANN,
(SEAL) *Notary Public,*
For Westchester Co.

Certificate filed in New York Co.

STATEMENT FOR MARCH, 1907.

STATE AND COUNTY OF NEW YORK, *ss.*:

HENRY LEEDS, being duly sworn, says that he is treasurer of Leeds & Catlin Company, defendant above named, and that pursuant to the order entered herein January 11, 1907, partially staying the preliminary injunction herein, he makes this affidavit: That during the period of said stay in the month of March, 1907,

defendant sold for use in the United States 33,802 disc sound records, subject, however to the conditions and restrictions set forth upon the annexed label marked "Exhibit A."

HENRY LEEDS,
Treasurer.

Subscribed and sworn to
before me this 1st day
of April, 1907.

JOSEPH ISAACS,
(SEAL) *Notary Public,*
New York Co. No. 6.

STATEMENT FOR APRIL, 1907.

STATE AND COUNTY OF NEW YORK, *ss.*:

EDWARD F. LEEDS, being duly sworn, says that he is president of the Leeds & Catlin Company, defendants above named, and that pursuant to the order entered herein January 11, 1907, partially staying the preliminary injunction herein, he makes this affidavit: That during the period of said stay in the month of April, 1907, defendants sold for use in the United States 32,650 disc sound records, subject, however, to the conditions and restrictions set forth upon the annexed label marked "Exhibit A."

EDWARD F. LEEDS.

Subscribed and sworn to
before me this 3d day of
May, 1907.

JESSIE B. KAY,
(SEAL) *Notary Public,*
New York County.

STATEMENT FOR MAY, 1907.

STATE AND COUNTY OF NEW YORK, *ss.*:

F. H. RIDGWAY, being duly sworn, says that he is assistant treasurer of Leeds & Catlin Company, defendant above named, and that pursuant to the order entered January 11, 1907, partially staying the preliminary injunction herein, he makes this affidavit: That during the period of said stay in the month of May, 1907, defendant sold for use in the United States 60,827 disc sound records, subject, however, to the conditions and restrictions set forth upon the annexed label marked "Exhibit A."

FRANCIS H. RIDGWAY,
Assistant Treasurer.

Subscribed and sworn to
before me this 1st day
of June, 1907.

LOUIS COHN,
(SEAL) *Notary Public*, No. 82,
New York Co., N. Y.

STATEMENT FOR JUNE, 1907.

STATE AND COUNTY OF NEW YORK, *ss.*:

EDWARD F. LEEDS, being duly sworn, says that he is president of Leeds & Catlin Company, defendant above named, and that pursuant to the order entered herein January 11, 1907, partially staying the preliminary injunction herein, he makes this affidavit: That during the period of said stay in the month of June, 1907, defendant sold for use in the United States 28,380

disc sound records, subject, however, to the conditions and restrictions set forth upon the annexed label marked "Exhibit A."

EDWARD F. LEEDS.

Subscribed and sworn to
before me this 1st day
of July, 1907.

FRANK Z. DEMAREST,
(SEAL) *Notary Public,*
New York Co.

STATEMENT FOR JULY, 1907.

STATE AND COUNTY OF NEW YORK, *ss.*:

EDWARD F. LEEDS, being duly sworn, says that he is president of Leeds & Catlin Company, defendant above named, and that pursuant to the order entered herein January 11, 1907, partially staying the preliminary injunction herein, he makes this affidavit: That during the period of said stay in the month of July, 1907, defendant sold for use in the United States 39,248 disc sound records, subject, however, to the conditions and restrictions set forth upon the annexed label marked "Exhibit A."

EDWARD F. LEEDS.

Subscribed and sworn to
before me this 1st day
of August, 1907.

JOSEPH ISAACS,
(SEAL) *Notary Public,*
New York Co., 506.

STATEMENT FOR AUGUST, 1907.

STATE AND COUNTY OF NEW YORK, *ss.*:

B. F. ELLSWORTH, JR., being duly sworn, says that he is general manager of Leeds & Catlin Company, defendant above named, and that pursuant to the order entered herein, January 11, 1907, partially staying the preliminary injunction herein, he makes this affidavit: That during the period of said stay in the month of August, 1907, defendant sold for use in the United States 45,622 disc sound records, subject, however, to the conditions and restrictions set forth upon the annexed label marked "Exhibit A."

B. F. ELLSWORTH, JR.

Subscribed and sworn to
before me this 31st day
of August, 1907.

ROBERT ROY, JR.,
(SEAL) *Notary Public*, Kings Co.
Certificate filed in New York Co.

STATEMENT FOR SEPTEMBER, 1907.

STATE AND COUNTY OF NEW YORK, *ss.*:

B. F. ELLSWORTH, JR., being duly sworn, says that he is general manager of Leeds & Catlin Company, defendant above named, and that pursuant to the order entered herein, January 11, 1907, partially staying the preliminary injunction herein, he makes this affidavit: That during the period of said stay in the month of September, 1907, defendant sold for use in the United

States 41,520 disc sound records, subject, however, to the conditions and restriction set forth upon the annexed label marked "Exhibit A."

B. F. ELLSWORTH, JR.

Subscribed and sworn to
before me this 1st day
of October, 1907.

ROBERT ROY, JR.,
(SEAL) *Notary Public*, Kings Co.
Certificate filed in New York Co.

STATEMENT FOR OCTOBER, 1907.

STATE AND COUNTY OF NEW YORK, *ss.*:

B. F. ELLSWORTH, JR., being duly sworn, says that he is general manager of Leeds & Catlin Company, defendant above named, and that pursuant to the order entered herein, January 11, 1907, partially staying the preliminary injunction herein, he makes this affidavit: That during the period of said stay in the month of October, 1907, defendant sold for use in the United States 49,724 disc sound records, subject, however, to the conditions and restrictions set forth upon the annexed label marked "Exhibit A."

B. F. ELLSWORTH, JR.

Subscribed and sworn to
before me this 1st day
of November, 1907.

ROBERT ROY, JR.,
(SEAL) *Notary Public*, Kings Co.
Certificate filed in New York Co.

STATEMENT FOR NOVEMBER, 1907.

STATE AND COUNTY OF NEW YORK, *ss.*:

B. F. ELLSWORTH, JR., being duly sworn, says that he is general manager of Leeds & Catlin Company, defendant above named, and that pursuant to the order entered herein, January 11, 1907, partially staying the preliminary injunction herein, he makes this affidavit: That during the period of said stay in the month of November, 1907, defendant sold for use in the United States 64,036 disc sound records, subject, however, to the conditions and restrictions set forth upon the annexed label marked "Exhibit A."

B. F. ELLSWORTH, JR.

Subscribed and sworn to
before me this 2d day of
December, 1907.

ROBERT ROY, JR.,
(SEAL) *Notary Public*, Kings Co.
Certificate filed in New York Co.

STATEMENT FOR DECEMBER, 1907.

STATE AND COUNTY OF NEW YORK, *ss.*:

B. F. ELLSWORTH, JR., being duly sworn, says that he is general manager of Leeds & Catlin Company, defendant above named, and that pursuant to the order entered herein, January 11, 1907, partially staying the preliminary injunction herein, he makes this affidavit: That during the period of said stay in the month of December, 1907, defendant sold for use in the United

States 44,236 disc sound records, subject, however, to the conditions and restrictions set forth upon the label annexed to the previous affidavits of sales filed herein.

B. F. ELLSWORTH, JR.

Subscribed and sworn to
before me this 31st day
of December, 1907.

ROBERT ROY, JR.,
(SEAL) *Notary Public*, Kings Co.
Certificate filed in New York Co.

STATEMENT FOR JANUARY, 1908.

STATE AND COUNTY OF NEW YORK, *ss.*:

B. F. ELLSWORTH, JR., being duly sworn, says that he is general manager of Leeds & Catlin Company, defendant above named, and that pursuant to the order entered herein January 11, 1907, partially staying the preliminary injunction herein, he makes this affidavit: That during the period of said stay in the month of January, 1908, defendant sold for use in the United States 46,960 disc sound records, subject, however, to the conditions and restrictions set forth upon the label annexed to the previous affidavit of sales filed herein.

B. F. ELLSWORTH, JR.

Subscribed and sworn to
before me this 1st day
of February, 1908.

ROBERT ROY, JR.,
(SEAL) *Notary Public*, New York Co.
Notary Public, Kings Co.; certificate filed in New York Co.

EXHIBIT.

ALEXANDER PARK,
Notary Public,
Commission expires Feb. 6, 1909,
604 Stephen Girard Bldg.,
Philadelphia,
(SEAL)

ORDER OF MAY 8, 1907, STAYING ISSUANCE OF MANDATE.

At a stated term of the United States Circuit Court of Appeals in and for the Second Circuit, held at the Court Rooms in the Post Office Building in the City of New York, on the 8th day of May, one thousand nine hundred and seven.

Present: Hon. WILLIAM J. WALLACE,
Hon. ALFRED C. COXE,
Circuit Judges.

Hon. CHARLES M. HOUGH,
District Judge.

ORDER STAYING MANDATE.

Leeds & Catlin Company,
Plaintiff in Error,

v.

Victor Talking Machine Company and United States Gramophone Company,
Defendants in Error.

It appearing from the annexed affidavit of Louis Hicks, counsel for plaintiff in error that plaintiff in error has served notice of the presentation to the Supreme Court of the United States of a petition for writ of *certiorari* to review the judgment finding the

plaintiff in error in contempt, which judgment has been affirmed by this Court; now, on motion of Louis Hicks, counsel for plaintiff in error, it is

Ordered that the issue of the mandate under said order of affirmance be, and the same hereby is, stayed until May 29th, 1907.

A. C. C.

(Endorsed: U. S. Circuit Court of Appeals for the Second Circuit. Leeds & Catlin Company, plaintiff in error, against Victor Talking Machine Co. and United States Gramophone Co., defendants in error. (Original.) Affidavit, notice of application and order requesting staying issue of mandate. Louis Hicks, solicitor for plff. in error. 71 Nassau Street, New York, N. Y. Service of a copy of within affidavit notice and proposed order on this 6th day of May, 1907, is hereby admitted. Stimson & Williams, solicitors for defts. in error. United States Circuit Court of Appeals, Second Circuit. Filed May 8, 1907. William Parkin, clerk.)

IN THE

IN THE SUPREME COURT OF THE UNITED STATES.

October Term of 1907. Nos. 307 and 308.

Leeds & Catlin Company,

Petitioner,

v.

Victor Talking Machine Company and United States Gramophone Company.

AFFIDAVIT OF LOUIS F. GEISSLER, SUR PETITION OF VICTOR TALKING MACHINE COMPANY AND UNITED STATES GRAMOPHONE COMPANY FOR ADDITIONAL SECURITY, ETC.

STATE OF PENNSYLVANIA,
COUNTY OF PHILADELPHIA, } *ss.*:

Louis F. Geissler, being duly sworn, deposes and says as follows:

I am a citizen of the United States, a resident of Philadelphia, and general manager of the Victor Talking Machine Company, one of the parties to the above entitled matter.

I have been general manager of the said company, or acting as such, since October 1, 1905, and am very familiar with the business of the company. I have read the petition for additional security, to which this affidavit is attached, and believe the statements therein contained are true.

A large portion of the business of the Victor Talk-

ing Machine Company consists in the manufacture and sale of disc records having the laterally undulatory groove of even depth for use in combination with the reproducing apparatus and forming the combination of the structure claimed in claim 35 for reproducing sound in accordance with claim 5 of the Berliner patent No. 534,543 in suit. For the Berliner patents, of which the Berliner patent No. 534,543, in suit is the main and important one, the said complainant has paid the sum of eight hundred thousand (800,000) dollars in cash. The Victor Company has made and sold the said reproducing apparatus, one element of the said claim for reproducing sound from the said disc records, the other element of said claims, in large quantities since the organization of the company in October, 1901, and has spent several millions of dollars in advertising the same and in perfecting the said reproducing apparatus and records, and there are to-day in use in the United States, hundreds of thousands of our said reproducing apparatus for reproducing sound from the complainants' said records, made in accordance with claims 5 and 35 of the patent in suit, and since the organization of the said Victor Talking Talking Machine Company, it has made and sold several millions of the said records for use in the said combination for reproducing sound recorded thereon through the medium of its sound reproducing apparatus, for which there is a large and increasing demand. The Victor Talking Machine Company has established an enormous plant in the city of Camden, New Jersey, exclusively for the manufacture and sale of the said records and reproducing apparatus, a large portion of which is devoted to the manufacture manufacture of the said records. A purchaser of the of the said records. A purchaser of the said reproducing apparatus invariably purchases from the said Victor Talking Machine Company, or its dealers, a number of the said disc records, containing various selections

of recorded sound, vocal, instrumental, recitations, etc., in order to have a repertoire of records. A purchaser and user of said complainant's reproducing apparatus also almost invariably after buying the first installment of records from the complainant, or its dealers, in conjunction with a number of records, orders additional records of various selections for his repertoire of records, not because the records purchased are worn out—as the same are most durable—but because he desires additional selections. The Victor Talking Machine Company each month publishes a new catalogue of new records, containing popular and desirable selections, and spends large sums of money in advertising the same, and has created a large and enviable reputation for its records for use in said combination with the reproducing apparatus. The Victor Talking Machine Company has spared no effort or expense to bring its records to the highest point of perfection, and to present to the public the most attractive and pleasing selections. For instance the Victor Company engages among others, the most expensive operatic talent for making records, such as Caruso, Melba, Scotti, and other noted operatic singers, and pays large prices to the said singers for each selection. By its efforts Victor Company has established for the said records and reproducing apparatus a wide and enviable reputation, which the Leeds & Catlin Company, by the sale of its records to owners and users of the Victor Company's reproducing apparatus, has attempted to divert, and has diverted, to a very large extent to the great damage and injury of the Victor Talking Machine Company. The records which it is now selling, and has been selling since the order of Judge LACOMBE in the United States Circuit Court staying the injunction pending appeal, have been misrepresented to the public as records for use in connection with reproducing appara-

tus, licensed under the said Berliner patent No. 534,543 in suit, through advertisements and otherwise of the said Leeds & Catlin Company and its dealers.

The defendant company has sold and is continuing to sell large quantities of the said disc records for use in connection with complainant's reproducing apparatus which have greatly injured the sale of the Victor Talking Machine Company's records, as the said purchasers of the complainant's reproducing apparatus, by reason of the said sales and representations of the defendant, have purchased and are continuing to purchase in large quantities, the Leeds & Catlin Company's records, where otherwise they would have purchased the Victor Talking Machine Company's records. The said Leeds & Catlin records can only be used for reproducing sound in combination with the reproducing apparatus, forming the combination of claim 35, by the method of claim 5, as there is no other reproducing apparatus upon the market in connection with which the said records could be used for reproducing sound.

I have made a careful examination of the sales of the disc sound records, manufactured by the Victor Talking Machine Company, and would say that during the last six months, since the sales of the Leeds & Catlin Company's records have increased to such a large extent, that the sales of records by the Victor Talking Machine Company, through its dealers and jobbers has very appreciably fallen off, in fact the sales of these records by the Victor Talking Machine Company during the period mentioned above have been diminished to the extent of the sales of the Leeds & Catlin Company during that period of time. The sales reported by Leeds & Catlin Company of the records sold since January, 1907, are 555,118 records, the average sales of records by the defendant per month, say since July 1, 1907, are 47,335 records per month. The Victor Talk-

ing Machine Company's sales of its said records, during the past six months (which is the period during which the defendant's sales of records have considerably increased) have fallen off very materially, in fact its sales of records during the past six months have been diminished to the extent of defendants's output during that period. The Victor Talking Machine Company's *damage* by reason of said loss of sales, attributed to the said infringement, since January, 1907, I would estimate to be at least $80,000.00. This, however, would not represent the total damage suffered by the Victor Talking Machine Company, by reason of this infringement upon the business, of the Victor Talking Machine Company would be almost irreparable. The Victor Company spends many hundreds of thousands of dollars a year in advertising the goods, a considerable portion of which advertisements becomes a loss to the Victor Company by reason of this infringement, as the defendant's said infringing records, which are sold mainly for use in connection with the Victor Company's reproducting apparatus or talking machines, tend to supplant or take the place of the Victor Company's goods, as stated, to a very appreciable extent.

The defendant's infringing records further materially damage and injure the complainant, the Victor Talking Machine Company, to an almost irreparable extent; among other things, for the reason that the defendant's records are made of inferior material and produce inferior results, and do not last as long as the Victor Company's records, which are made of a superior quality. Further, the defendant, the Leeds & Catlin Company, through their distributors, or parties who sell at retail their records, as Macy & Company, of 34th and Broadway, New York City, advertise the said records *for use on licensed* reproducing apparatus made under the Berliner patent No. 534,543, in suit.

and purchasers and the public generally, are led to believe that the said defendant's infringing records are legitimate records licensed by the complainants under the said Berliner patent; therefore, the said records are not only sold, where genuine Victor records would otherwise be purchased, but as they are so misrepresented, in many instances, that they are believed by the public to be the legitimate goods of the complainant. The damage to the complainant's business by reason, among other things, of the said records being of the inferior quality is very large.

The Victor Talking Machine Company have had many complaints from their jobbers and dealers, by reason the sales of these infringing records by the Leeds & Catlin Company, notably within the last eighteen months, and especially in view of the fact that the Leeds & Catlin Company sell the said records at a very much less price than the Victor Talking Machine Company can afford to sell the same. Leeds & Catlin Company sell the said records to the jobbers or dealers at about 20 to 30 cents a record, and the same are sold by the defendant's dealers to the public at prices varying from 39 cents to one dollar and a half per record, such for instance as advertised by Macy & Company, of New York, at its department store, and advertised widely in the recent issues of the *New York Herald*, a copy of which advertisement is attached to these papers, a copy of which advertisement is attached and marked "Advertisement of January 24, 1908, of Deft's records."

The bond, therefore, heretofore entered in this proceeding by order of the Circuit Court is manifestly inadequate, and would only secure the complainants against a very small fraction of the amount which they would be entitled to recover in damages, or profits, or both, should this Court affirm the decisions of the United States Circuit Court of Appeals. These com-

plainants would be without remedy, as this deponent avers and believes that the said Leeds & Catlin Company is not financially responsible to anything like the extent of the amount to which these complainants would be entitled to recover in the accounting proceedings. The said Leeds & Catlin Company is a comparatively small concern, having a comparatively inexpensive plant, and this deponent believes that the defendant makes its records of inferior material and in a comparatively inexpensive manner, not employing or having to pay for the skilled labor which the Victor Talking Machine Company employs in order to maintain the superiority of its records, and it has not the additional burden of a large amount of capital invested in patents, as this complainant has invested in the patent in suit, as the defendant is making and selling the records in defiance of complainant's patent for which the complainant was obliged to pay, as heretofore stated, the approximate sum of eight hundred thousand (800,000) dollars. The defendant has comparatively little or no advertising expenses, as it, as this deponent believes, sells its goods on the strength of the Victor Talking Machine Company's advertisements and reputation; which company expends, as heretofore stated, many thousands of dollars a year in such advertisements.

In fact, the defendant's expenses of marketing its records is reduced to a minimum, as the said records are an infringement of the complainant's patent in suit, and relies for its sales upon the reputation made by the complainants and maintained by the complainants.

This deponent believes that should this Honorable Court sustain the decision of the United States Circuit Court of Appeals, the defendant company would practically go out of business "over night," and these complainants would have no means of recovery except such

security as the Court may require the said defendant to provide for the purpose. The said defendant has, in the judgment of this deponent, nothing to lose by continuing this infringement, and the enormous sale of the said records which it is continuing to make and sell, but has everything to gain, making large sums of money by said infringing sales, but distributing it among those interested, or placing it where these complainants could not reach the same, unless this Honorable Court requires the adequate security prayed for to be entered.

That the damage to the complainant company by reason of the continued sales by the defendant company will continue to the same extent, if not to a greater extent, until the decision of this Honorable Court, and until the time that the defendant shall discontinue the infringement under a favorable decision of this Court.

In the foregoing, I have considered only the damage suffered by the complainants, and have not taken into consideration the profits to which the complainants would be entitled to recover from the defendant, should this Honorable Court affirm the decision of the Honorable United States Circuit Court of Appeals.

As to the profits made by the Leeds & Catlin Company by the sale of said infringing disc records, I would note that while the said defendant, Leeds & Catlin Company, sells its said disc records to its dealers, and through them to the public at low prices, for instance, as shown by the Macy & Company advertisement in the *New York Herald* of recent date, hereto attached, which sells the said Leeds & Catlin records, and styles the same as the "Nassau." These ten-inch records are sold to the public at 39 cents each. While this retail price of the defendant's records is considerably less than the retail price of complainant's ten-inch record, yet the material which the defendant puts in the said

records is very much cheaper than the superior material employed in the complainant's records, and as hereinbefore stated in this affidavit, the defendant's expenses, relative to the manufacture and marketing of said records, is very much less than the complainant's; among other things, it has not the large advertising expenses of the Victor Talking Machine Company, amounting to hundreds of thousands of dollars a year, as the defendant relies on the complainant's reputation for the sale of records, in selling defendant's records to the public; the defendant has not the large expenses incurred by the Victor Talking Machine Company for talent, vocal or instrumental, in the making of its records, as the selections upon the defendant's records are not of the high grade order of the Victor Talking Machine Company's records; the Victor Company pays as much as $1,000 for one selection to some of its talent; the defendant has no expenses chargeable to patents, such as the Victor Talking Machine Company, as hereinbefore pointed out, as the defendant is using and infringing complainant's patents, and is therefore relieved of this expense, the interest on the capital invested by the Victor Company in said patents being equal to about $48,000 a year. As hereinbefore stated, the defendant's plant, as compared with the Victor Company's plant is comparatively inexpensive; and further, among other things, the labor which the defendant company employs is not the high priced skilled labor employed by the Victor Talking Machine Company in making its records. I would further point out that it was shown in the suit of the American Graphophone Company against the said Leeds & Catlin Company, decided June 11, 1907 (155 Fed. Rep., 427), in a motion for preliminary injunction to restrain the Leeds & Catlin Company from infringing the Jones patent No. 688,739, of December 10, 1901, for Process of Making Sound Rec-

ords, Judge LACOMBE refused the injunction mainly on the ground that there was proof that the Leeds & Catlin Company made its records by "making duplicate copies of fully finished commercial foreign-made records." It therefore appears that at least some of the defendant's infringing records are made by merely copying finished commercial records by any well known copying process, such as copper-plating or electro-plating, etc., which means that they would have no vocal or instrumental talent to pay for, but would merely copy a commercial record made by some other concern who had paid for the talent. This is what is known to the trade at "dubbing," and is a copy, or counterfeit, of the commercial records of other concerns. This "dubbing," or copying would, of course, reduce defendant's expenses in the production of the infringing records very materially.

It is also shown in the Transcript of Record in the present case, that some of the infringing records sold at retail by the defendant company, are sold at a very much higher price than 39 cents. The affidavit of Charles K. Bennett (T. R. No. 308, p. 16, etc.) shows that the infringing records he bought he paid 60 cents apiece for four of them and for two others he paid $1.00 apiece, and for another of said records purchased by Bennett from defendant, he paid $1.50 (T. R. No. 308, p. 19). The affidavit of George M. Thompson (T. R. No. 308, p. 18) shows that for the six infringing records he bought from the defendant company he paid one dollar each for five records and thirty-five cents for one. The fact is that the defendant has sold its records at various prices, both to the dealers and to the public, and while it frequently sells some of its records at a low price to the public, its expenses incident to the manufacture and marketing of the same are, as hereinbefore pointed out, comparatively small, and its profit large. From the foregoing, and from my knowl-

edge of such matters, the cost to the defendant in manufacturing said inferior records, under the circumstances does not exceed ten cents each on an average.

For the foregoing reasons I am of the opinion and aver that the defendant's profits per record, taking the 60-cents record as a basis, as a fair average, were not less than 20 cents per record, which allows for the jobbers' discount of 50 per cent upon the list price of 60 cents per record. In other words, considering that the defendant only received 30 cents for each 60-cent record, the profit of the defendant would be not less than 20 cents per record. The defendant would, therefore, receive an average profit upon the 555,118 records accounted for by it to the complainant to February 1, 1908, under the order of Judge LACOMBE, $111,023.60, which amount would be correspondingly increased during the coming months, before a decision by this Honorable Court shall be had upon these cases, as the probabilities are that the number of records to be manufactured and sold by the defendant will be as great, if not greater per month, as during the past year and a half.

I would state in conclusion, that while the name of the Leeds & Catlin Company does not appear upon the "Nassau" records, they are manufactured and sold by the Leeds & Catlin Company, as shown by correspondence between R. H. Macy & Company and Horace Pettit, counsel for the Victor Company, which fact will not be disputed. A letter of Macey & Company, of 34th and Broadway, New York City, of December 6, 1907, to Mr. Pettit, referring to Mr. Pettit's letter to it of December 3, 1907, complaining of the said sales of records and misleading character of their advertisements, states: "We beg to acknowledge receipt of your favor of the 3d inst. It has been referred to the Leeds & Catlin Company, the manufacturers of the records to which you object."

The character of the notices of the Leeds & Catlin Company placed upon said infringing records in misleading and intending to mislead the public into the belief that the defendant's records are *licensed* records under the patent in suit. The attention of the Court is called to the following notice which the defendants place conspicuously upon the back of the infringing records:

> "This record is sold by the manufacturer upon condition that when sold by dealers to the public it must be sold at not less than the regular list price, and upon the further condition that the record shall be used only for the reproduction of sound directly from the record. This record is sold for use on all mechanical feed-device machines and upon all licensed Victor, Columbia and Zonophone machines, and all other machines licensed under U. S. Patent No. 534,543, in replacement of any worn out or broken record thereof. Any other use of this record will be a violation of the conditions under which it is sold and an infringement."

I am informed and believe that the defendant is making every effort to flood the market pending the decision of this Honorable Court in this case with the said infringing records, taking advantage of the said stay of injunction pending the decision of this Honorable Court, believing and knowing that at the day of reckoning, should this Honorable Court affirm the decisions of the court below, that the complainants will find little or nothing from which to recover the damages and profits to which they are and shall be entitled.

LOUIS F. GEISSLER.

Sworn and subscribed to
before me this eighth
day of February, 1908.

ALEXANDER PARK,
604 Stephen Girard Bldg., Phila.
(SEAL) *Notary Public.*
Commission expires Feb. 6, 1909.

"ADVERTISEMENT OF JANUARY 24, 1908, OF DEFENDANT'S RECORDS."

"NASSAU"

Fifth fl.

10-inch Talking
Machine Records,
Instead of 60c., 39c.

hese are the Records that have recently revolutionized the sale of Talking Machine Records. Until we introduced them you could not procure a 10-inch Disc Record for less than 60c. There is no better Record than the "Nassau", no matter what price you pay. It may be used on the Victor, Columbia, Zonophone and all other disc machines licensed under United States Patent No. 534,543.

ALEXANDER PARK,
(SEAL) *Notary Public,*
604 Stephen Girard Bldg.,
Philadelphia.
Commission expires February 6, 1909.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1907. Nos. 307 and 308.

Leeds & Catlin Company

v.

Victor Talking Machine Company and United States Gramophone Company.

AFFIDAVIT OF BELFORD G. ROYAL, SUR PETITION OF VICTOR TALKING MACHINE COMPANY AND UNITED STATES GRAMOPHONE COMPANY, COMPLAINANTS BELOW, HEREIN REFERRED TO AS THE RESPONDENTS, FOR ADDITIONAL SECURITY TO INDEMNIFY RESPONDENTS FOR DAMAGES AND PROFITS DUE TO INFRINGEMENT ACCRUING DURING PERIOD OF STAY OF DECREE FOR PRELIMINARY INJUNCTION AND THE PRELIMINARY INJUNCTION.

STATE OF PENNSYLVANIA,
COUNTY OF PHILADELPHIA, } *ss.*:

BELFORD G. ROYAL, being duly sworn according to law, deposes and says as follows:

I am a citizen of the United States, a resident of Camden, New Jersey, and am president of the Universal Talking Machine Manufacturing Company, having its principal office in Newark, New Jersey.

The said company, of which I am president, is and has been for a number of years past engaged in the manufacture and sale of disc talking machines and records for reproducing sound therefrom. I have been

in the talking machine business for the past ten years or more, and spent the greater portion of that period of time in the making of sound records and record material, and am very familiar with the grades and qualities of material, the cost of manufacture, etc. I am especially familiar with the disc sound records manufactured for use in connection with reproducing apparatus constructed in accordance with claims 5 and 35 of the Berliner patent No. 534,543, in suit.

I am very familiar, not only with the material used by different concerns in manufacturing the said records, but with the plant, character of labor, etc., necessary in the manufacture of such records. I have carefully examined the material used by the defendant, the Leeds & Catlin Company, in its disc sound records on the market, particularly the sound records of the defendant, styled the "Nassau," sold by Macy & Company, Thirty-fourth and Broadway, New York City, and which are sold and advertised for sale by Macy & Company to the public at the retail price of 39 cents each. The said "Nassau" records, sold by Macy & Company, which are made by the Leeds & Catlin Company, I state positively from my knowledge of record material, is of a very inferior quality, being a very inferior composition, having a very small percentage of shellac, and the bulk of the binders being of very cheap and common earthy material, and that by reason of the inferior qualities of the said record, its lasting capacity for reproducing purposes would be very short-lived compared with the disc records of the Victor Talking Machine Company, all of which are made of very superior material.

The cost to manufacture one of these Nassau records by the Leeds & Catlin Company would be not more, at the most, than 10 cents. The cost of said record would be made up essentially as follows:

Cost of material about	.07
Cost of labor about	.01½
Cost of label	.00⅛
Cost of edging and inspecting	.00⅛
Allowing manufacturers' profit	.01¼
Total	.10

There are no advertising expenses, as far as the defendant company is concerned, in connection with the sale of these "Nassau" records, or of other records sold by its distributors.

This cost per record is essentially the total cost to the defendant, in my judgment, when using this inferior material. This estimate does not represent by any means the cost of a disc record of superior material, such as manufactured by the Victor Talking Machine Company, or by the Universal Talking Machine Manufacturing Company, which is a licensee under the patent in suit. I would also say that the disc records of the American Graphophone Company are of a high superior grade to the Leeds & Catlin Company records, which American Graphophone Company is also a licensee under the patent in suit.

These ten-inch records of the defendant company, known as the "Nassau" records, such as sold by Macy & Company, are sold to the public at 39 cents each. The Leeds & Catlin Company have also sold other of their infringing records at the retail price of 60 cents each, some at $1.00, and some as high as $1.50 each, all of which, that I have examined, being of substantially the same material as the "Nassau" record.

The Leeds & Catlin Company, in selling these records to jobbers, would sell at the maximum jobbers' discount of 50 per cent. off the retail price, on records retailing for not less than 60 cents, and the said "Nassau" records could not have been sold by the

defendant to the jobber at a greater discount than 50 per cent. off the retail price, which would make the price of the said "Nassau" records to the defendant of approximately 20 cents each. The 60-cent records would be sold by the defendant to the jobber at 30 cents, and the $1.00 records at 50 cents, and the $1.50 records at 75 cents. As before stated, the total cost of each of these records to the Leeds & Catlin Company would not be greater than 10 cents per record.

For the foregoing reasons, I am of the opinion and aver that the defendant's profits per record, taking the 60-cent record as a basis, as a fair average, were not less than 20 cents per record, which allows for the jobbers' discount of 50 per cent. upon the list price of 60 cents per record. In other words, considering that the defendant only received 30 cents for each 60-cent record, the profit to the defendant would be not less than 20 cents per record. The defendant would, therefore, receive an average profit upon the 555,118 records, accounted for by it to the complainant to February 1, 1908, under the order of Judge LACOMBE, $111,023.60, which amount would be correspondingly increased during the coming months, before the decision by this Honorable Court shall be had upon these cases, as the probabilities are that the number of records to be manufactured and sold by the defendant will be as great, if not greater, per month as during the past year and a half.

As hereinbefore stated, the Universal Talking Machine Manufacturing Company, of which I am president, has for a number of years past done a large business in the manufacture and sale of disc talking machine records, operating under the license under the patent in suit, for the reproduction of sound upon sound reproducing apparatus made under the said patent, which my said company also manufactures and sells. The large sales by the Leeds & Catlin Company of the said

infringing records, which have been constantly increasing, has very materially damaged and affected this licensee's business in the sale of records, and has detracted considerably from the profits. The inferior quality of the defendant's records also damage and injures the legitimate business, as the defendant records are in appearance so like the legitimate records that they are mistaken by purchasers for the legitimate records, and further the defendant and its distributors advertise the said records in a misleading manner, so as to lead the public to believe that the said infringing records are legitimate licensed records. Among other things, the Leeds & Catlin Company places a label upon the back of its records, such as the "Nassau" record hereinbefore referred to, which reads as follows:

> "This record is sold by the manufacturer upon condition that when sold by dealers to the public it must be sold at not less than the regular list price, and upon the further condition that the record shall be used only for the reproduction of sound directly from the record. This record is sold for use on all mechanical feed-device machines and upon all licensed Victor, Columbia and Zonophone machines and all other machines licensed under U. S. patent No. 534,543 in replacement of any worn out or broken record thereof. Any other use of this record will be a violation of the conditions under which it is sold and an infringement."

One of the above named records is ready in court to be produced.

The defendant's distributors, such for instance as Macy & Company, of New York, in advertising the said infringing records, advertise it in such a manner as to mislead the public into believing that they are producing legitimate records, wherein the advertisement states:

"NASSAU"

Fifth Fl.

10-INCH TALKING
MACHINE RECORDS,
INSTEAD OF 60c, 39c.

T
Macys

These are the records that have recently revolutionized the sale of Talking Machine Records. Until we introduced them you could not procure a 10-inch Disc Record for less than 60c.

There is no better Record than the 'Nassau,' no matter what price you pay. It may be used on the Victor, Columbia, Zonophone and all other disc machines licensed under United States patent No. 534,543."

The Zonophone referred to in the above advertisement is the talking machine, and the talking machine record manufactured by the Universal Talking Machine Manufacturing Company, of which this deponent is the president. The said advertisement misleads the public into the belief that the said defendant's records are licensed legitimate records, which, of course, is not the fact.

It has been the aim of the Universal Talking Machine Manufacturing Company in making its Zonophone records, under the license of the patent, to maintain a high reputation for quality and durability, and the said Zonophone records are made, as hereinbefore stated, of superior material, costing very much more to make than the defendant's records. Consequently the inferior records put out by the defendant company, especially when the public is led to believe that they are the licensed records, greatly damages and injures, not only the complainant company, but its licensees as well.

The Leeds & Catlin Company, the defendant, while it has capacity for manufacturing a large number of infringing records, is not a large concern, and has a comparatively inexpensive plant, using inexpensive presses, etc.; the defendant company has an office in the City of New York, and has its factory for pressing records located elsewhere. I understand from general reputation in the trade, that the defendant concern is slow in paying its bills, and generally hard up financially is the rumor which I hear from talent employed by the defendant company in making its records. In the event of the decision of the Court of Appeals in this case being sustained by this court, the Leeds & Catlin Company would not be financially able to pay anything like the large amount of profits, or damages, or both, which the complainants would be entitled to recover against it. Further, I believe the condition of the firm is such that should a judgment be obtained against it to anything like the amount which I believe the complainants would be entitled to recover, it would be utterly unable to pay the same, and I further believe that in the event of such judgment, there would be little or no assets in the concern from which the complainants could satisfy such judgment.

And further this deponent saith not.

B. G. ROYAL.

Sworn to and subscribed before me this 8th day of February, 1908.

ALEXANDER PARK,
(SEAL) *Notary Public,*
604 Stephen Girard Bldg.,
Philadelphia.

Commission expires February 6, 1909.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term of 1907. Nos. 307 and 308.

Leeds & Catlin Company
Petitioner,

v.

Victor Talking Machine Company and United States Gramophone Company.

AFFIDAVIT OF ALBERT C. MIDDLETON, SUR PETITION OF VICTOR TALKING MACHINE COMPANY AND UNITED STATES GRAMOPHONE COMPANY FOR ADDITIONAL SECURITY, ETC.

STATE OF PENNSYLVANIA,
COUNTY OF PHILADELPHIA, } *ss.*:

ALBERT C. MIDDLETON, being duly affirmed according to law, deposes and says as follows:

I am secretary of the Victor Talking Machine Company, one of the parties in this suit, and have been since its organization in October, 1901.

I am quite familiar with the talking machine business and have devoted considerable time during my connection with the Victor Talking Machine Company, to the subject of the manufacture of the disc sound records. I am also familiar generally with the talking machine trade and the business done by other manufacturers, and am familiar with the disc sound records manufactured by the Leeds & Catlin Company, the defendant herein.

I also have some familiarity with the business done by the said Leeds & Catlin Company and have had occasion to give affidavits in these suits, relative to the subject-matter of this patent in suit, heretofore. I have read the affidavits of Louis F. Geissler and Belford G. Royal, verified February 8, 1908, attached to the petition in this matter, and depose that the facts therein stated are true, and desire to add my testimony in support of the facts therein averred.

I would add that the Victor Talking Machine Company is the largest reproducer of talking machines and records in the world and employs over 2000 hands; and that its exclusive business is in the manufacture and sale of reproducing apparatus and records, in accordance with the claims of the Berliner patent in suit.

ALBERT C. MIDDLETON.

Affirmed and subscribed to
before me this eighth day
February, 1908.

ALEXANDER PARK,
(SEAL.) *Notary Public.*
604 Stephen Girard Building, Philadelphia.
Commission expires February 6, 1909.

Office Supreme Court, U. S.
FILED.
FEB 21 1908
JAMES H. MCKENNEY,
CLERK.

SUPREME COURT OF THE UNITED STATES

October Term, 1907. Nos. [redacted] 807-8

LEEDS & CATLIN COMPANY

v.

VICTOR TALKING MACHINE COMPANY and UNITED STATES GRAMOPHONE COMPANY.

Re Petition of the Victor Talking Machine Company and United States Gramophone Company, Complainants Below, Herein Referred to as the Respondents, for Additional Security to Indemnify Respondents for Damages and Profits Due to the Infringements Accruing During Period of Stay of Decree for Preliminary Injunction.

Brief on Behalf of Respondents in Support of the Petition.

HORACE PETTIT,
Counsel for Respondents,
604 Stephen Girard Building,
Philadelphia, Pa.

International, 236 Chestnut St.

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The amount of bond, referred to herein as the contempt bond, as fixed by the Court below upon the granting of the supersedeas or stay of January 11, 1907, is insufficient in law, as good and sufficient security to indemnify these respondents for damages and profits due to infringement accruing during the period of stay of the decree for preliminary injunction 18

The stay or supersedas granted in the said order of January 11, 1907, was not granted as a matter of right and should, therefore, be construed, in view of the circumstances attending its granting, and as it was intended to operate by the Court below. The stay, or supersedeas in the contempt proceedings herein, by the order of January 11, 1907, was granted in the exercise of the discretion of the Court below 24

There has been such a "change of the circumstances of the case and of the parties" as to bring this petition within the rule set forth by this Honorable Court in Jerome vs. McCarter, 21 Wall., p. 17, and under its authority the relief prayed for in the petition should be granted 25

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IN THE

Supreme Court of the United States.

October Term, 1907. Nos. 307 and 308.

LEEDS & CATLIN COMPANY,

v.

VICTOR TALKING MACHINE COMPANY AND UNITED STATES GRAMOPHONE COMPANY.

RE PETITION OF THE VICTOR TALKING MACHINE COMPANY AND UNITED STATES GRAMOPHONE COMPANY, COMPLAINANTS BELOW, HEREIN REFERRED TO AS THE RESPONDENTS, FOR ADDITIONAL SECURITY TO INDEMNIFY RESPONDENTS FOR DAMAGES AND PROFITS DUE TO INFRINGEMENT ACCRUING DURING PERIOD OF STAY OF DECREE FOR PRELIMINARY INJUNCTION AND THE PRELIMINARY INJUNCTION.

BRIEF ON BEHALF OF RESPONDENTS IN SUPPORT OF THE PETITION.

STATEMENT.

To the Honorable Chief Justice and Associate Justices of the Supreme Court of the United States:

The Victor Talking Machine Company and United States Gramophone Company, complainants below, on February 11, 1908, filed a petition in the Clerk's Office of this Honorable Court, for additional security to in-

demnify them for damages and profits due to infringement accruing during period of stay of decree for preliminary injunction and the preliminary injunction, which stay was obtained from the Court below on motion of the Leeds & Catlin Company, defendant below, pending an appeal from an order made and entered in the Circuit Court of the United States for the Southern District of New York, finding the said defendant below in contempt for violating and disobeying the preliminary injunction granted in the said suit.

A bond for $10,000 (Petition, p. 10), was required by the Court below on the granting of the said stay, the stay granted being pending an appeal from the said order finding the said defendant below in contempt. These respondents claim that the said bond is insufficient to indemnify them for the profits and damages due to infringement accruing during the period of stay now continuing, and, therefore, pray this Honorable Court for an order directing that additional security to that end be required from the said defendant below. (See detailed statement herein p. 10.)

The facts showing the necessity for the additional security prayed for are set forth and considered in detail herein under Point V (p. 30) and Point VI (p. 33).

These cases are before this Honorable Court on two writs of *certiorari* to the United States Circuit Court of Appeals for the Second Circuit (first), to review the decree for preliminary injunction heretofore granted herein, and (second), to review the decree finding the said defendant below, the Leeds & Catlin Company, in contempt for violation of the writ of preliminary injunction issued pursuant to the said decree for preliminary injunction. The said writs of *certiorari* were granted by this Honorable Court May 27, 1907, upon the petitions therefor of the said defendant below, the Leeds & Catlin Company.

This suit was begun on July 12, 1904, by the filing of the bill of complaint of Victor Talking Machine

Company and United States Gramophone Company against Leeds & Catlin Company, for infringement of Letters Patent No. 534,543, for Gramophones, granted February 19, 1895, to Emile Berliner, of which only claims 5 and 35 are involved in this suit (T. No. 307, pp. 1-11). As stated in the specification of said patent (T. No. 307, p. 456), the invention therein patented "has reference to improvements in the method of and apparatus for recording and reproducing sounds," and the reproducing apparatus therein shown, described and claimed, is adapted to reproduce sounds from a record thereof formed in a flat disc of hard material in which the stylus or needle, connected with a suitable diaphragm, is free to be vibrated and propelled by and in accordance with the sound record. The particular sound record, or traveling tablet, described in said letters patent, is a flat disc of hard material on which the sounds are recorded by means of lateral undulations in a spiral groove of substantially even depth, the sounds being reproduced in a sound box by the vibrations of the stylus or needle of the reproducing apparatus traveling in the groove. When it is desired to reproduce the sounds recorded on such a record or traveling tablet, the reproducing stylus is placed in engagement with the outer end of the spiral groove, and the tablet or record disc is rotated by suitable means. As the traveling tablet or disc sound record rotates, the reproducing stylus is vibrated laterally by the undulations in the sides of the record groove, thereby reproducing the sounds in the reproducing apparatus, and at the same time, the reproducing stylus is propelled by the said groove, and is carried across the face of the sound record; claim 35 of said patent is for apparatus, and reads as follows:

> "35. In a sound reproducing apparatus consisting of a traveling tablet having a sound record formed thereon and a reproducing stylus shaped

for engagement with said record and free to be vibrated and propelled by the same, substantially as described."

Claim 5 is for the method and reads as follows:

"5. The method of reproducing sounds from a record of the same which consists in vibrating a stylus and propelling the same along the record by and in accordance with the said record, substantially as described." (Pet., pp. 5-6.)

The answer of the said defendant, Leeds & Catlin Company, to the said bill of complaint was filed on December 21, 1905 (T. No. 307, pp. 12-43), and the replication on February 7, 1906 (T. No. 307, p. 44). Thereafter an order was made and entered therein on March 24, 1906, requiring the said defendant to show cause why a preliminary injunction should not be issued against it (T. No. 307, p. 45). Argument on the return of the said order to show cause was had on April 6 and 13, 1906, before Judge TOWNSEND, of said United States Circuit Court, and on April 26, 1906, the Honorable Judge handed down his opinion granting the said preliminary injunction, with leave to defendant to move for a stay pending appeal (T. No. 307, p. 327). The decree for said preliminary injunction was made and entered in the said United States Circuit Court on May 2, 1906 (T. No. 307, p. 328), and on the same date, an order staying the writ of preliminary injunction granted in said decree was entered in the court below, pending the decision of the Circuit Court of Appeals, provided an appeal from the said decree be promptly perfected, said stay being granted, however, on condition that the said defendant below enter security in the sum of ten thousand dollars ($10,000), to indemnify these respondents for profits and damages due to infringement accruing during the period of said stay (T. No. 307, p. 330). The said defendant below

filed bond in the required sum of ten thousand dollars ($10,000), said bond being referred to in the petition herein as "Preliminary Injunction Bond," a copy of which is annexed to the petition, and marked Exhibit A; (Petition, p. 20), and perfected its appeal to the United States Circuit Court of Appeals for the Second Circuit. The said appeal was duly argued by Louis Hicks, Esq., of New York City, for the appellant, and Horace Pettit, Esq., for the appellees, very elaborate briefs being filed on both sides, occupying portions of two days, and on October 12, 1906, the appeal was decided, the said Circuit Court of Appeals affirming, in open court, the decree of the Court below (T. No. 307, p. 545), the order of affirmance pursuant to said decision being made and entered on October 22, 1906 (T. No. 307, p. 546).

The mandate of the said Circuit Court of Appeals was duly issued as directed in the said order of affirmance to the said Circuit Court of the United States, and the writ of preliminary injunction was entered on October 27, 1906, and served upon the said defendant below on October 29, 1906 (T. 308, pp. 9 and 10).

The foregoing statement is of the proceedings certified to this Honorable Court in Case No. 307, and will be found in the transcript in the said case which is the return of the said Circuit Court of Appeals to the writ of *certiorari* granted in that case by this Honorable Court to review the decree for preliminary injunction.

Re Contempt Proceedings.

On November 19, 1906, upon the petition of the Victor Talking Machine Company, and United States Gramophone Company, complainants below (T. No. 308, pp. 5-27), an order was issued out of the said Circuit Court of the United States requiring the said Leeds & Catlin Company, defendant below, to show

cause why an attachment should not issue against it by reason of violating and disobeying the said writ of preliminary injunction, theretofore issued in the suit (T. 308, p. 4).

The contempt proceedings, just referred to, and which are now before this Honorable Court (Case No. 308), were founded on the claim of these respondents, complainants below, that the said defendant below, Leeds & Catlin Company, had violated said writ of preliminary injunction by making, using and selling the traveling tablet having a sound record thereon, the first element of said claim 35, for use in connection with the reproducing stylus, the other element of the said combination of said claim 35, and to reproduce sound in accordance with the method of claim 5. There was no dispute in the court below, in said contempt proceedings that the said defendant below, Leeds & Catlin Company, had, after the service upon it of said writ of preliminary injunction, the same as it had done before suit brought, made and sold flat disc sound records which were made and sold to be used in connection with the reproducer of the patent in the combination specified in claim 35, and intended to be operated in accordance with the method of claim 5. It was not disputed on the part of the defendant that the said disc records or traveling tablets sold by them, after the injunction, were made and sold with the intention that they should be used in connection with the reproducing stylus or reproducing machine of the complainants, by owners of the same. Judge LACOMBE, in the Circuit Court, in holding the defendant in contempt, said:

> "Indeed, it is difficult to escape the conviction that the larger part of defendant's sales were contrived by them to enable the owners of reproducers purchased from complainant or its licensees to produce such musical pieces as such owners might desire to hear, through the co-operation in combina-

tion with such reproducers of records made by defendant instead of records made by complainant, * * * This seems to be a case of contributory infringement—an entirely voluntary and intentional one, not in any wise excused by the circumstance that complainant—had theretofore sold reproducers combined with other records to such owners (Am. Graph. Co. *v.* Leeds, 87 F. R., 873). Nor is the substitution of these new records, bought more frequently in order to increase the repertory of tunes than as substitutes for worn out discs * * * in any legitimate sense 'repairs' " (T. No. 308, p. 74).

Claims 5 and 35 in suit had been previously sustained in a similar infringement and the defendant enjoined in the case of the Victor Talking Machine Company and United States Gramophone Company against the American Graphophone Company, 145 Fed. Rep., p. 350.

The Circuit Court in an opinion by Judge LACOMBE, a portion of which is above quoted (T. No. 308, p. 74), on January 5, 1907, found the defendant in contempt and imposed a fine of $1000, one-half to the United States and one-half to the complainant, collection to be suspended, pending appeal. (See decision of Judge LACOMBE in Circuit Court [T. No. 308, p. 74], and decision of United States Circuit Court of Appeals, Second Circuit [T. No. 308, p. 90]). Under an order granted in the court below, the decree for preliminary injunction and the preliminary injunction were stayed, pending appeal from the said order on contempt, and the said defendant below, Leeds & Catlin Company, has continued, and still continues the manufacture and sale of said infringing sound records for said use on an increased and very large scale, as hereinafter pointed out.

In the answer to the said petition and order to show cause, the defendant below filed its answer, and numerous affidavits and exhibits (T. No. 308, pp. 28-73),

and the argument upon the return of the said order to show cause, was had before Judge LACOMBE of the Circuit Court of the United States for the Southern District of New York on November 30, 1906. In an opinion dated January 5, 1907, as before stated, Judge LACOMBE found the said defendant below in contempt, and imposed a fine of one thousand dollars ($1000), collection to be suspended pending appeal (T. No. 308, p. 74). A decree for contempt in accordance with said opinion was made and entered in the said Circuit Court of the United States on January 11, 1907 (T. No. 308, p. 75), and on motion of solicitor for the defendant below, an order was made and entered on January 11, 1907, staying collection of said fine (T. No. 308, p. 76), upon the filing of a bond for one thousand dollars ($1000), or depositing with the clerk of the said court, the sum of one thousand dollars ($1000), in cash, by the said defendant below, as security, to secure the payment of said fine when due. On the same day, to wit, January 11, 1907, on the application of the said defendant below, an order was made and entered in the said suit, staying the decree for preliminary injunction and the preliminary injunction theretofore issued, pending appeal from the said decree for contempt, provided that the defendant should,

> "within fifteen days from the filing of this order, file with the clerk of this court a bond in the sum of ten thousand dollars ($10,000), with sufficient surety, to be approved by the clerk of this court, as security to indemnify complainants for damages and profits due to infringement accruing during the period of said stay; and provided also that defendant shall, on the first day of each calendar month during the period of said stay and on the last day of said stay, file with the clerk of this court a statement sworn to by one of its officers showing the number of disc sound records sold by it during the month or part of the month preceding the day of the filing thereof" (T. No. 308, p. 77).

That thereafter and on, or about the twenty-fourth day of January, 1907, the said defendant below filed a bond in the sum of ten thousand dollars ($10,000), as required in said order of January 11, 1907 (T. No. 308, p. 77), a copy of which bond is annexed to the petition herein and marked Exhibit B, and referred to as "Contempt Bond." (Pet., p. 24.)

On January 26, 1907, a bond in the sum of one thousand dollars (T. No. 308, pp. 78-80), was filed by the defendant below as provided in the order of January 11, 1907, staying collection of fine (T. No. 308, p. 76).

Thereafter, and on January 26, 1907, the said defendant below, the Leeds & Catlin Company, filed its petition for writ of error from the said judgment or decree on contempt entered in the said suit on January 11, 1907, and also its assignment of errors (T. No. 308, pp. 82-85), and a citation on said writ of error was issued on January 26, 1907 (T. No. 308, p. 87), and served on January 31, 1907 (T. No. 308, p. 88).

The hearing upon said writ of error was had before the United States Circuit Court of Appeals for the Second Circuit on April 9, 1907, which court, on May 2, 1907, handed down its opinion affirming the said decree of January 11, 1907, Judge WALLACE dissenting, finding the said Leeds & Catlin Company in contempt (T. No. 308, pp. 90-95), and an order of affirmance, in accordance with said opinion was made and entered in the said Circuit Court of Appeals on May 8, 1907 (T. No. 308, p. 96), which order further provided that a mandate issue out of the said Circuit Court in accordance with the said order of affirmance.

On May 8, 1907, upon the motion of the said defendant below, the issuance of the mandate of the said Circuit Court of Appeals as directed in said order of affirmance, was stayed until May 29, 1907, by an order made and entered on said May 8, 1907 (Pet., p. 49).

This order is not found in the transcripts of records in these cases, but a certified copy thereof is attached to the affidavit of Harry Cobb Kennedy, filed in support of this petition (Pet., p. 29). This said order staying the mandate was obtained upon the representation of the said defendant below that it intended to petition this Honorable Court for writs of *certiorari* to review the decree for preliminary injunction heretofore made and entered herein, and also to review the said decree finding the said defendant below in contempt.

Petitions were filed in this Honorable Court by the said defendant below on May 13, 1907, asking for the issuance of the said writs of *certiorari,* and on May 27, 1907, this Honorable Court granted the said petitions of the defendant below, as before set forth, and on May 28, 1907, issued two writs of *certiorari* to the Honorable Judges of the United States Circuit Court of Appeals for the Second Circuit, commanding them to send without delay to this Honorable Court, the record and proceedings recited in the said petitions for writs of *certiorari.* The said writs *of certiorari* have been complied with, and the said records and proceedings are now before this Honorable Court, the cases being Nos. 307 and 308 of the October Term, 1907.

It should be stated that the preliminary injunction bond (Pet., p. 20), required by Judge TOWNSEND to secure the complainants during the stay, pending appeal from his decision, filed April 26, 1906, probably only covers the period of stay of injunction pending the decision and order of the United States Circuit Court of Appeals for the Second Circuit, which order was filed October 22, 1906, and upon which the writ of injunction issued October 27, 1906. The only bond, therefore, now available to the complainants for the infringement by the sale of records since the contempt, is the Contempt Bond for only $10,000, which was en-

tered January 24, 1907, pending appeal to the United States Circuit Court of Appeals. (Pet., p. 24.) This petition is, therefore, for additional security to indemnify the respondents for damages and for profits accruing to the defendant below, since May 8, 1907, the date of the order of affirmance in the contempt proceedings by the said Circuit Court of Appeals, holding the defendant in contempt, by the manufacture and sale of records for infringing purposes, as hereinbefore set forth.

The said order of May 8, 1907, staying the issuance of the mandate of the said Circuit Court of Appeals until May 29, 1907 (Pet., p. 49), was made in view of the fact that a decision upon the said petitions for writs of *certiorari* presented to this Honorable Court on May 13, 1907, would probably be made on May 27, 1907, the last day of the term at which these petitions were heard. The decisions of this Honorable Court granting the said petitions were made on May 27, 1907, and the writs of *certiorari* pursuant to said decisions were issued on May 28, 1907, to the Judges of said Circuit Court of Appeals, thus staying further proceedings in said Circuit Court of Appeals and preventing the issuance by the said Circuit Court of Appeals of its mandate to the Court below, and thereby preventing the reinstating of the preliminary injunction heretofore granted herein. The said defendant below, the Leeds & Catlin Company, has, therefore, continued to make and sell records for infringing purposes by reason of the stay of the preliminary injunction then and now existing, and still continues such manufacture and sale on a large scale. (Pet., p. 17.)

The petition herein sets forth the granting of the two writs of *certiorari* in these cases by this Honorable Court (Pet., p. 4); the subject-matter of the patent in suit (Pet., p. 5); the contempt proceedings had heretofore herein (Pet., p. 6); the steps of the litigation in the courts below (Pet., pp. 8-12); the inadequacy of the contempt bond for $10,000 required

to be filed as a condition of the said stay (Pet., p. 13); the probability that these cases Nos. 307 and 308 will not be reached for argument before this Honorable Court during the present term (Pet., p. 14), the probable average profit of the said defendant below upon each of said infringing records sold by it to be twenty (20) cents (Pet., p. 15); the probable amount of such profits accruing to the said defendant below from January 11, 1907, to June 1, 1908, to be at least $146,551.60 (Pet., p. 15); the probable profits accruing to the said defendant below by reason of continuing sales of the said infringing records from May 8, 1907, to October, 1908, to be at least $182,179.60 (Pet., p. 16); that these respondents are being irreparably damaged by the continuance by the said defendant below of its sales of the said infringing articles (Pet., p. 16); that the amount of damage thus being done is at least the sum of $80,000 (Pet., p. 17); that in view of such amounts of profits that have accrued and which will accrue to said Leeds & Catlin Company, and in view of the amount of damage to which these respondents have been, and will be subjected by reason of the continued and continuing infringing acts of the said defendant below, counting from May 8, 1907, the date of the order of affirmance of the decree of the Circuit Court in the contempt proceedings, that additional security in the sum of at least $200,000 should at this time be required of the said defendant below (Pet., p. 17); that this petition is diligently presented to this Honorable Court (Pet., p. 18); and finally the prayer of these respondents that this Honorable Court require the said defendant below to file additional security in the sum of $200,000, to indemnify these respondents for damages and profits due to infringement accruing during the period of stay of the said preliminary injunction from and after the date of the issuance of the order of affirmance of the decree for con-

tempt in this cause in the United States Court of Appeals for the Second Circuit, namely, since May 8, 1907 (Pet., p. 18).

Accompanying this petition of these respondents, and filed in support thereof, are the affidavits of, first, Harry Cobb Kennedy, in which is set forth the (a) history of the previous litigation in these cases; (b) the fact that the contempt bond of $10,000 was manifestly intended by Judge LACOMBE to cover only a period of about four months of infringement at the rate the Leeds & Catlin Company were then manufacturing said infringing records which has since materially increased; (c) the probable average sales, etc,; second, the affidavit of Louis F. Geissler, general manager of the Victor Talking Machine Company, one of the respondents herein, which, among other things, sets forth the damages which are accruing to these respondents by reason of the stay of the said writ of preliminary injunction, and the making and selling by the defendant below, of the infringing articles hereinbefore referred to; third, the affidavit of Belford G. Royal, which sets forth, among other things, the probable amount of profits which the said defendant below, Leeds & Catlin Company, has made, is making and will continue to realize by its making and selling of the infringing articles hereinbefore referred to, under the stay of the said writ of preliminary injunction, also the fact that the complainants are most inadequately secured, etc.; and fourth, the affidavit of Albert C. Middleton, secretary of the Victor Talking Machine Company, one of the respondents herein, in corroboration of the two affidavits last above recited.

The relief prayed for in this petition is that additional security in the sum of $200,000, additional to that of the bond for ten thousand dollars ($10,000) contempt bond (Petition, p. 24), be given to these respondents for the profits and damages accruing by

reason of the continued stay of preliminary injunction herein since May 8, 1907. The ground urged in support of the petition is that these respondents are entitled to *full indemnification* for the profits and damages accruing during the said period of stay, and that the contempt bond already given by the defendant below as such indemnification is in nowise *indemnifying,* but, on the contrary, is totally inadequate. It is further urged that the continuance of the said period of stay of preliminary injunction without the additional security to these respondents prayed for, would be unfair, unjust, inequitable, and not contemplated by the Court below when it fixed the amount of the bond.

POINT I.

This Honorable Court alone has jurisdiction and authority to grant the relief prayed for in this petition.

Hubbard *v.* Tod, 171 U. S., 474;
Louisville, N. A. & C. Ry. Co. *v.* Louisville Trust Co., *et al.*, 78 F. R., 659;
Draper *v.* Davis, *et al,* 102 U. S., 370;
Morrin *v.* Lawler, 91 Fed. Rep., 693;
Re Chetwood, 165 U. S., 443, 462;
Jerome *v.* McCarter, 21 Wall., 17.

As set forth in this petition, these cases are before this Honorable Court on two writs of *certiorari* to the United States Circuit Court of Appeals for the Second Circuit to review the decree for preliminary injunction heretofore granted (Case No. 307), and to review the decree finding the said defendant below, Leeds & Catlin Company, in contempt for violating and disobeying the writ of preliminary injunction issued pursuant to said decree (Case No. 308).

The said writs of *certiorari* were granted by this Honorable Court upon the petitions therefor of the

said defendant below, Leeds & Catlin Company, under the authority and jurisdiction vested in this Court, under Section 6 of the Act of March 3, 1891, 26 Stat. at Large, 828, which section determines in part the appellate jurisdiction given the circuit courts of appeal created by the said Act, and also in the second paragraph of the said Section 6 determines the jurisdiction of this Honorable Court over final decrees of the said Circuit Courts of Appeal, which is as follows:

> "And excepting, also, that in any such case as is hereinbefore made final in the circuit court of appeals, it shall be competent for the Supreme Court to require, by *certiorari* or otherwise, any such case to be certified to the Supreme Court for its review and determination with the same power and authority in the case as if it had been carried by appeal or writ of error to the Supreme Court."

This case is one of those in which the judgment or decree of the Circuit Court of Appeals shall be final, the case having arisen under the patent laws of the United States, which is one of the classes of cases in which, under the first paragraph of said Section 6 of Act of March 3, 1891, the judgment or decrees of the Circuit Courts of Appeals shall be final. These cases thus being before this Honorable Court under writs of *certiorari* issued by this Honorable Supreme Court, are now pending as if on appeal of the said defendant below, Leeds & Catlin Company, the petitioner for said writs of *certiorari*, and this Honorable Court has exclusive jurisdiction of all the proceedings in the said cases. This interpretation of the said section of the said Act as made by this Honorable Court is found in the case of Hubbard *v.* Tod, *supra*, wherein the Court said, at page 494:

> "It is provided by the judiciary act of March 3, 1891, that any case in which the judgments or decrees of the circuit court of appeals are

thereby made final, may be required, by *certiorari* or otherwise, to be certified to this court 'for its review and determination, with the same power and authority in the case as if it had been carried by appeal or writ of error to the Supreme Court.'

"This case belongs to the class of cases in which the decree of the Circuit Court of Appeals is made final by the statute, and having been brought up by *certiorari* on the application of the petitioner below, is pending before us as if on his appeal."

The application embodied in this petition cannot, therefore, be made to the courts below and is properly made to this Honorable Court (Draper *v.* Davis, *et al.*, *supra*), in which this Honorable Court held:

(Syllabus) "The power of a justice of the court below, over the appeal to this court and over the security, in the absence of fraud, is exhausted when he takes the security and signs the citation. From that time the control of the *supersedeas*, as well as the appeal, is transferred to this Court."

The power of this Court over proceedings brought before it by writ of *certiorari* to review judgments in proceedings in contempt is set forth in the opinion of this Honorable Court *in re* Chetwood, *supra*, where this Honorable Court said, at page 392:

"Judgments in proceedings in contempt are not reviewable here on appeal or error. Hayes *v.* Fischer, 102 U. S., 121 (26: 95); *re* Debs, 158 U. S., 573 (39: 1095); 159 U. S., 251. But they may be reached by writ of *certiorari* in the absence of any other adequate remedy."

The rule is established in the Federal Courts that "when all the steps necessary to perfect an appeal have been properly taken, the action is within the con-

trol of the Appellate Court, and a motion for substitution of the appeal bond must be addressed to that court" (Morrin *v.* Lawler, *supra*). This Honorable Court has laid down the rule under which motions or petitions respecting the security given on a *supersedeas* in the court below must be made, in Jerome *v.* McCarter, *supra,* and that the present petition is fully within the rule there laid down will be completely shown under another point.

The case of Rubber Company *v.* Goodyear, *et al.,* 73 U. S., 153, is particularly in point in this case. Rule 29 of this Honorable Court was adopted at the time of the decision in that case. One of the questions disposed of in that case was a motion by the appellants for the reduction of the amount of the bond for *supersedeas.* The case was before this Honorable Court on appeal from a final decree of the Circuit Court, which found that the defendant below had infringed certain letters patent belonging to the complainant below, and awarded the complainant below the sum of $310,757.72 profits made by the defendant below in violation of the rights of the complainant below under said letters patent. The Court below, in fixing the amount of the bond for *supersedeas,* required a bond in double the amount of the decree. It appeared that the appellants had made a deposit of bonds amounting to a sum not less than $200,000 before the bond on appeal was required, and this Honorable Court held that in view thereof the appeal bond might be reduced to the sum of $225,000. The opinion of this Honorable Court, in part, is as follows:

> "In order to make the appeal operate as a *supersedeas* it is necessary for the appellant to give good and sufficient security for the prosecution of the appeal, and for all costs and damages that may be adjudged against him. * * * It is not required that the security shall be in any fixed

proportion to the decree. What is necessary is, that it be sufficient, and when it is desired to make the appeal a *supersedeas,* that it be given within ten days from the rendering of the decree. The question of sufficiency must be determined in the first instance by the judge who signs the citation; but after the allowance of the appeal, this question, as well as every other in the cause, becomes cognizable here."

"It is, therefore, matter of discretion with this Court to increase or diminish the amount of the bond, and to require additional sureties, or otherwise, as justice may require."

POINT II.

The amount of bond, referred to herein as the contempt bond, as fixed by the Court below upon the granting of the supersedeas or stay of January 11, 1907, is insufficient in law, as good and sufficient security to indemnify these respondents for damages and profits due to infringement accruing during the period of stay of the decree for preliminary injunction.

Hudson *v.* Parker, 156 U. S., 277;
Catlett *v.* Brodie, 22 U. S., 9 Wheat., 553, 555;
O'Reilly *v.* Edrington, 96 U. S., 724;
Rule 29, Rules of the Supreme Court.

The appeal contemplated by the Court below and pending which appeal the stay of the decree for preliminary injunction and the preliminary injunction were stayed by the order of January 11, 1907 (T. No. 307, p. 77), was an appeal from the order on contempt of the Circuit Court of the United States for the Southern District of New York, to the United States Circuit Court of Appeals for the Second Circuit, and such appeal was taken pursuant to Section 6 of Act of March

3, 1891, which gave said Circuit Court of Appeals jurisdiction to hear and finally determine said appeal.

Re Christensen Engineering Co., 194 U. S., p. 458;
Bessette *v.* W. B. Conkey Co., 194 U. S., p. 324;

In re Christensen Engineering Co., *supra,* the syllabus, which is fully supported by the opinion, states:

> "A writ of error lies from the appropriate circuit court of appeals to review an order of a circuit court, adjudging the defendant in a suit for the infringement of a patent guilty of contempt in disobeying a preliminary injunction, and ordering him to pay a fine of $1,000, one-half to the United States and the other half to the complainant."

This case is so exactly in point with the facts in these cases, that it is absolutely conclusive in establishing the jurisdiction of the Circuit Court of Appeals for the Second Circuit in hearing the apeal from the said order on the contempt made in this case. Reference is made in the opinion in that case to the opinion of this Honorable Court in Bessette *v.* W. B. Conkey Co., *supra,* which was decided just prior to the decision *in re* Christensen Engineering Co., and is reported in the same volume of the reports of this Honorable Court. The opinion in Bessette *v.* W. B. Conkey Co., contains an exhaustive examination of the writ of review in contempt cases, and is authority for the opinion *in re* Christensen Engineering Co., *supra.* It therefore follows that the only period of stay which could have been contemplated by the Court below when it made the said order of stay, was during the pendency of an appeal to the Circuit Court of Appeals for the Second Circuit from said order on contempt (provided, also, that the said appeal should be "promptly taken

and diligently prosecuted") (T. No. 308, p. 77), and was intended to cover a period of time extending only from January 11, 1907, until the time of the determination of the appeal by the said Circuit Court of Appeals, which was May 8, 1907. This must be so, for no other court than the Circuit Court of Appeals for the Second Circuit had jurisdiction to hear the said appeal, and the Court below was without any authority, or jurisdiction, to grant a period of stay beyond the pendency of the said appeal to the said court. Furthermore, the appeal from the Circuit Court to the Circuit Court of Appeals is the only "appeal" provided for in the statutes governing the jurisdiction of the Federal Courts. These cases are not now before this Honorable Court on "appeal," but are before this Honorable Court by reason of the exercise of its jurisdiction, set forth in Section 6 of the Act of March 3, 1891, and thus it seems to be indisputable that when Judge LACOMBE, upon the granting of the said period of stay decided that these respondents were entitled to a bond to indemnify them for profits and damages due to infringement accruing during the period of stay, he had in mind that the bond was to cover the period of time from January 11, 1907, to the determination of the Circuit Court of Appeals for the Second Circuit of the appeal of the defendant below from the said order on contempt.

Furthermore, the Court below required, under the said order granting the stay, that the appeal contemplated under the said order must be "promptly taken and diligently prosecuted" (T. No. 308, p. 77). At the time of the making of the said order of January 11, 1907, there remained several months of the October Term, 1906, of the said Circuit Court of Appeals, during which time the appeal contemplated in the said order of January 11, 1907, could be heard (Pet., p. 13) (Kennedy Affidavit, Pet., p. 34), and it is altogether probable that if the said defendant below had not taken

and prosecuted such appeal to a hearing before the said Circuit Court of Appeals, before the end of the October Term, 1906, *i. e.*, before the end of May, 1907, a motion by these respondents to reinstate the injunction, or to vacate the said order of stay of January 11, 1907, would have been granted.

In Hudson *v.* Parker, *supra,* a petition for writ of mandamus was submitted to this Honorable Court to command the respondent (Parker), a United States District Judge, to admit the petitioner (Hudson), to bail on a writ of error from this Honorable Court upon a judgment of the United States District Court, adjudging the petitioner to be guilty of an assault with intent to kill, and sentencing him to imprisonment, etc. The respondent refused to fix the amount of the bail bond on the ground that he had no legal right to do so. This Honorable Court held that the petitioner was entitled to the mandamus to the District Judge to admit the petitioner to bail, on his giving bond in proper form and with sufficient sureties. On the question of the approval of the bail bond the Supreme Court said, page 287:

> "Upon a writ of error in a civil case, the requisite security is ordinarily taken by the justice or judge who allows the writ and signs the citation. Jerome *v.* McCarter, 88 U. S., 21 Wall., 17. But where the bond taken is insufficient in law, this court, in the exercise of its inherent jurisdiction as a court of error, may direct that the writ be dismissed, unless the plaintiff in error gives security sufficient in this respect, to be taken and approved by any justice or judge who is authorized to allow the writ of error and citation. Catlett *v.* Brodie, 22 U. S., 9 Wheat., 553, 555; O'Reilly *v.* Edrington, 96 U. S., 724."

In O'Reilly *v.* Edrington, 96 U. S., 724, a motion to dismiss was based upon several points, one of which related to the approval of the bond. There had been

an irregularity in the court below in the acceptance of the security upon the appeal. This Honorable Court held that the objection to the bond was well taken, and ordered a dismissal of the appeal, unless the appellant should

> "file with the clerk of this court a bond, with good and sufficient security, conditioned according to law, for the purposes of the appeal. If the appellant desires that the appeal shall operate as a *supersedeas,* the bond may be in the sum of $7,000; otherwise, in the sum of $250."

The attention of this Honorable Court is also called to Rule 29, Rules of the Supreme Court, which rule was adopted by this Court in 1867, at which time appeals and writs of error from the circuit courts were heard by this Honorable Court. The rule, in part, is as follows:

> "*Supersedeas* bonds in the circuit courts must be taken, with good and sufficient security, that the plaintiff in error, or appellant shall prosecute his writ or appeal to effect, and answer all damages and costs if he fail to make his plea good. Such indemnity, where the judgment or decree is for the recovery of money not otherwise secured, must be the whole amount of the judgment or decree, including just damages for delay, and costs and interests on the appeal; * * *"

It is respectfully submitted that, while this rule is not directly applicable to the facts in the present case, yet it shows that it is the intention and policy of this Court to take the necessary steps to protect the rights of its litigants. The establishment of the Circuit Courts of Appeal by the Act of March 3, 1891, took away much of the appellate jurisdiction of this Honorable Court, to which Rule 29 was particularly applicable. However, these respondents may be considered to be before this Honorable Court as appellees, while

the said defendant below is the appellant; and, as appellees, these respondents would be entitled, under said Rule 29, to a *supersedeas* bond with good and sufficient security that the plaintiff in error, or appellant (here the Leeds & Catlin Company), shall prosecute its writ, or appeal, to effect and answer all *damages* and costs, if it fail to make its plea good.

Furthermore, it is respectfully submitted that this case is one "where the judgment, or decree, is for the recovery of money not otherwise secured," and the indemnity required of the appellant "must be for the whole amount of the judgment, or decree, including just damages for delay and costs and interests on the appeal." Rule 29, Rules of the Supreme Court.

It, therefore, appears that if the Circuit Court of Appeals had not been established and that these parties were before this Honorable Court on appeal, or writ of error from the Circuit Court directly, these respondents would be entitled under said Rule 29, to full indemnification for profits and damages accruing owing to the *supersedeas* in this case; which indemnification is all that is herein requested.

It is, therefore, respectfully submitted that these respondents are without the good and sufficient security to indemnify them for the profits and damages due to infringement accruing during the stay granted in the said order of January 11, 1907, to which they are entitled by law. The Circuit Court intended that the bond which it required to be given by the said defendant below on the granting of the said stay, should be in full indemnification to these respondents. This is shown by the language of the order granting the stay (T. No. 308, p. 77). This Honorable Court having exercised its jurisdiction in issuing the said writs of *certiorari,* has prolonged the stay to an extent not contemplated by the Court below, and to cover which extended period no indemnification was, or could have

been provided by the Court below. The action of the Court below in determining that these respondents are entitled to good and sufficient security to indemnify them, was discretionary, and will not be reviewed by this Honorable Court. That is to say, that the question of whether or not these respondents are entitled to good and sufficient security to indemnify them during the period of stay, has been conclusively settled by the Court below, deciding that these respondents are entitled to such indemnification.

It is respectfully submitted, therefore, that this Honorable Court, by virtue of the jurisdiction conferred upon it, should carry out the plain intention of the Court below, and grant these respondents full indemnification which the Court below decided they were entitled to, but which it had no power to grant since this Honorable Court has taken jurisdiction.

POINT III.

The stay, or supersedeas granted in the said order of January 11, 1907, was not granted as a matter of right and should, therefore, be construed, in view of the circumstances attending its granting, and as it was intended to operate by the Court below. The stay, or supersedeas in the contempt proceedings herein, by the order of January 11, 1907, was granted in the exercise of the discretion of the Court below.

Lalance & Grosjean Mfg. Co. *v.* Haberman Mfg. Co., 54 F. R., 375;
Re Haberman Mfg. Co., 147 U. S., 525.

The Court below having exercised its discretion and granted a stay upon terms to the defendant below, these respondents are entitled to have the terms upon which the said stay was granted; *i. e.*, indemnification, strictly complied with. The Court below intended that

these respondents should be fully indemnified by reason of the stay of the preliminary injunction. As has hereinbefore been shown, such indemnification has not been given to these respondents.

Affidavit of Geissler (Pet., p. 51), affidavit of Royal (Pet., p. 64), and affidavit of Middleton (Pet., p. 71).

The position of the parties is, by the issuing of the writs of *certiorari*, therefore, changed, owing to the continuance of the stay beyond May 8, 1907, the date of the determination of the appeal contemplated in the order granting the stay, by the grants of the said writs of *certiorari*, the defendant below is continuing its manufacture and sale of the infringing articles to its great profit, while these respondents have no adequate indemnification for such profits, and to which indemnification the Court below decided these respondents were entitled.

It is, therefore, submitted that the defendant below, Leeds & Catlin Company, should not be permitted to be benefited to the injury and damage of these respondents, where it plainly appears that it was the intention of the Court below that the granting of the stay by it, under the conditions imposed by it, would not change the positions of the parties, and that these respondents would not suffer pecuniary damage or loss by reason of the granting of the said stay.

POINT IV.

There has been such a "change of the circumstances of the case and of the parties" as to bring this petition within the rule set forth by this Honorable Court in Jerome v. McCarter, 21 Wall., p. 17, and under its authority the relief prayed for in the petition should be granted.

Jerome *v.* McCarter, 21 Wall., p. 17;
Williams *v.* Claflin, 103 U. S., p. 753.

The leading case covering the questions raised in

this petition is that of Jerome *v.* McCarter, *supra.* In that case, a bill was filed by the junior mortgagee against the mortgagor, a bankrupt, and its assignees in bankruptcy, for the foreclosure of his mortgage, and a sale of the mortgaged property, subject to certain prior encumbrances. The case came before this Honorable Court on appeal by the bankrupt and its assignees in bankruptcy, from a decree ordering the payment of $1,057,686.37 to the complainant by the bankrupt or its assignees, and in default of such payment the sale of the mortgaged property, subject to an encumbrance thereon of $1,500,000 and upwards. The Justice who granted the appeal and signed the citation accepted a *supersedeas* bond in the sum of $10,000. The appellee made a motion before this Honorable Court to increase the amount of the bond and require additional sureties, which motion was decided in the opinion now under consideration.

The motion was denied by this Honorable Court on the ground that this Honorable Court would not review the discretion exercised by the Justice who accepted the bond, inasmuch as all the circumstances were present at the time of his acceptance of the bond as were present at the time of the motion. The opinion gives the history of the previous litigation in this Honorable Court upon similar questions to those raised by the motion, and stated the rule governing the disposition of such motions, which rule has since been followed by this Honorable Court, and which is as follows:

> "We all agree that if after the security has been accepted, the circumstances of the case or of the parties, or of the sureties upon the bond have changed, so that security which, at the time it was taken, was 'good and sufficient,' does not continue to be so, this court may, upon a proper application, so adjudge and order as justice may require."

And further in the opinion, this Honorable Court said:

> "So, while we agree that in a proper case, after an appeal or writ of error taken here, this Court may interfere and require additional security upon a *supersedeas*, it will not attempt to direct or control the discretion of a judge or justice in respect to a case as it existed when he was called upon to act, except by the establishment of rules of practice."

It has been shown above, in Point I, that these cases are before this Honorable Court as if on appeal by the said defendant below, the Leeds & Catlin Company (Hubbard *v.* Tod, 171 U. S., 474); and, therefore, the rule laid down in Jerome *v.* McCarter, *supra*, as to the action which this Honorable Court will take upon an application for additional security upon a *supersedeas*, applies to these cases.

It is respectfully submitted that there has been such a "change of the circumstances of the case" since the acceptance by the Court below of the bond upon the *supersedeas* herein as to bring this case within the rule laid down in Jerome *v.* McCarter, *supra*, and that the relief prayed for in this petition should be granted. It has been shown above that the Court below, when it accepted the bond upon the *supersedeas* granted by it, could not have contemplated a period of stay beyond the determination of the appeal of the defendant below by the Circuit Court of Appeals, and furthermore, that such appeal must be "promptly taken and diligently prosecuted."

It further appears in the petition (Petition, p. 13) and in the affidavit of Henry Cobb Kennedy (Petition, p. 34), that it was altogether probable that the Court below contemplated that such determination of the said appeal would be made by June, 1907. There is absolutely nothing in the record, nor can it be reasonably

inferred, that the Court below, when fixing the amount of the bond, had in mind a period of stay which would include the stay now existing by reason of the grants of the writs of *certiorari* herein. Neither can it be questioned but that the Court below considered that these respondents were entitled to good and sufficient surety of indemnity for the profits and damages due to infringement accruing during the period of the stay granted by him. The bond accepted by the Court below (Petition, p. 24), was not punitive in its nature, but indemnifying. The very language of the order providing for the giving of the said bond recites that it was "to indemnify" these respondents for "all damages and profits due to infringement of claims 5 and 35 of the letters patent" in suit accruing during the period of the stay.

To indemnify means "to save harmless," "to make good to," "to preserve or secure against loss or damage," "to engage to make good or secure against anticipated loss," and it is respectfully submitted that the bond given by the defendant below is not now such indemnification. The Court below intended that these respondents should be indemnified, and fixed the amount of the bond required by it to act as such indemnification over the period of stay contemplated by the order granting the stay. Now, owing to a circumstance which was not present at the time of the fixing of the amount of the bond, to wit, the granting of the said writs of *certiorari*, the bond does not serve as such indemnification to which the Court below determined these respondents were entitled, and it is respectfully submitted that this Honorable Court should by its direction for the filing by the said defendant below of the additional security requested in this petition, carry out the obvious intentions of the Court below, and give these respondents good and sufficient security to cover the period of stay running from May 8, 1907.

The case of Jerome *v.* McCarter, *supra*, has been often cited in the subsequent opinions of this Honorable Court, and always followed.

Williams *v.* Claflin, *supra*, is particularly applicable to the present case. The appellants in that case were interested only in preserving their security for a debt amounting to about $152,000, when the decree was rendered.

> "When they took their appeal, execution of the whole decree had been stayed by another appeal of the present appellees, who were the complainants below. Consequently the amount of security to be given then by these appellants was a matter of but little importance comparatively. The other appeal has been dismissed, and in this way the circumstances of the case are materially changed. It is easy to see that what was sufficient security on this appeal when taken, is probably not so now."

This Honorable Court, under these circumstances, modified the *supersedeas*, and allowed the sale of the mortgaged property to be made under the decree, sufficient proceeds to be retained by the Court below to satisfy the claim of the appellants. In the opinion in that case, this Honorable Court cited Jerome *v.* McCarter, *supra*, as its authority for taking that action. The dismissal of the appeal referred to in the opinion was considered sufficient cause to require additional security to be given. It is respectfully submitted that the granting of said writs of *certiorari* in these cases are analogous to the dismissing of the appeal in Williams *v.* Claflin, *supra*, and that under the authority of this case the additional security prayed for in this petition should be granted.

It thus appears that the rule laid down in Jerome *v.* McCarter, *supra*, should govern the disposition of this petition. That the rule is firmly established in this

Honorable Court is shown by the cases cited. It is considered unnecessary to refer to further cases sustaining this proposition, inasmuch as these respondents are convinced that the facts upon which this petition is founded reveals a change of circumstances of the case by the granting of the *certiorari* since the acceptance of the *supersedeas* bond by the Court below.

POINT V.

The additional security requested in the petition herein is reasonable in amount and indemnifying only.

Affidavit of Louis F. Geissler (Petition, p. 51).
Affidavit of Belford G. Royal (Petition, p. 64).
Petition (P. 17).

The amount of additional security requested in this petition is $200,000.

The affidavit of Belford G. Royal, president of the Universal Talking Machine Manufacturing Company, and who has been engaged for a number of years past in the manufacture and sale of disc talking machines and records for reproducing sound therefrom, and who is very familiar with the cost of manufacture of disc sound records, has great probative force, owing to his experience in the industry and to the positive statements which he makes. He shows (Petition, p. 65), that the average cost to the defendant below of the "Nassau" records, infringing records made and sold by the said defendant, the Leeds & Catlin Company, is not more than ten cents per record (Petition, p. 66); which, in his judgment, is the total cost per record to the said defendant below (Petition, p. 66). It further appears that the profit to the said defendant below, the Leeds & Catlin Company, upon each of the said "Nassau" records would be approximately twenty cents (Petition, p. 67). The total number of infringing

records sold by the defendant from January 11, 1907, the date of the beginning of the stay of the preliminary injunction, to February 1, 1908, according to the sworn statements of the said defendant below (Petition, p. 15), is 555,118, and the amount of profit to the said defendant below upon such sales would be at least $111,023.60 (Royal affidavit, Petition, p. 67).

See also Geissler affidavit (Petition, p. 61).

The approximate number of records sold by the defendant below from May 8, 1907, to February 1, 1908, is 406,000 (Kennedy affidavit, Petition, p. 37), and the amount of profit to the said defendant below upon such sales would be at least $81,200.

The probable sales of the records by the defendant below from February 1, 1908, to say, June 1, 1908, assuming that the cases could be heard at this term of Court and the decision reached by that time, would amount on the foregoing basis to 177,800 records, and the amount of profit to the said defendant below upon such sales would be at least $35,560, which amount added to $81,200, the amount of the profits from May 8, 1907, to February 1, 1908, as before stated, would be $116,760. The probabilities are, it is respectfully submitted, that the decision of this Honorable Court could not be rendered by June 1, 1908, and would likely not be for a considerable period later. Even if the cases should be heard before the adjournment of this term of Court, it is probable that a decision would not be rendered until, at least, after the convening of the Court in October, 1908.

The probable sales of the records by the defendant below from February 1, 1908, to the decisions of these cases by the Honorable Court, should the decisions of these cases not be had until say, December, 1908, will be 445,000 (Kennedy affidavit, Petition, p. 37), to the probable profit to the defendant below of a sum not less than $89,000; which sum, added to the amount of

accrued profit from May 8, 1907, to February 1, 1908, to wit, $81,200, makes the amount $170,200 probable profits accrued and which will accrue to the defendant below, and for which sum it will be liable to these respondents should they prevail before this Honorable Court.

As appears in the petition (Petition, p. 14), and the affidavit of Harry Cobb Kennedy (Petition, p. 37), it is probable that the hearing of these cases by this Honorable Court will not occur before October, 1908, thus making a further stay of at least ten months in which the defendant may continue sales of the infringing articles. The average sales per month of the said defendant below of the said infringing articles during the last twelve months is 44,500 (Kennedy affidavit, Petition, p. 37), and it may fairly be assumed that the sales for the next ten months will at least be as much as in the year last past, and will probably be increased (Royal affidavit, Petition, p. 67).

The amount of profits and damages for which the defendant will be liable to these respondents, should they prevail before this Honorable Court, for the period from May 8, 1907, to the probable time of determination of these cases by this Honorable Court, will be, therefore, not less than $250,200; which sum includes the estimated damages of not less than $80,000, as hereinafter shown.

Re-Damages.

The amount of damages, aside from the profits, which these respondents have suffered by reason of the existing stay has been estimated by Mr. Geissler, General Manager of the Victor Talking Machine Company, one of the respondents herein, to be, at least, $80,000 (Petition, p. 55); which, however, would not represent the total damage suffered (Petition, p. 55).

The total amounts of profits and damages which these respondents would be entitled to recover from the said defendant below, should these respondents prevail before this Honorable Court at the hearing of these cases, may fairly and reasonably be estimated to be not less than $250,200. This calculation does not include the sale of infringing records during the stay period from January 11, 1907, to May 8, 1907, pending the appeal to the Circuit Court of Appeals in the contempt proceedings. The Court below, as shown above, intended that these respondents should be *indemnified* for profits and damages accruing during the period of stay.

It is respectfully submitted that the Court below contemplated that the respondents should be fully indemnified during the full period that the injunction should be stayed, but that the stay has extended far beyond the period contemplated by the Circuit Court, owing to a change of circumstances, *i. e.*, the granting of the *certioraris*, occurring since the fixing of the amount of the contempt bond, originally intended to act as such indemnity, and that this Honorable Court should therefore provide such additional adequate indemnity of $200,000, by granting the relief prayed for by this petition.

POINT VI.

It would be unfair, unjust and inequitable to allow the defendants below to accumulate and dissipate large profits by reason of the continuing of the said stay without giving ample indemnification to these respondents.

That the defendant below is manifestly not financially responsible to anywhere near the amount which these complainants would be entitled to recover in

accounting proceedings, is clearly shown by the affidavit of Geissler (Petition, p. 51), affidavit of Royal (Petition, p. 64), and affidavit of Middleton (Petition, p. 71).

It is further submitted that this bond of at least $200,000 should be required under the circumstances, as it is manifest that any corporation, such as the defendant, may divide and dispose of all its ill-gotten gains, accumulated during the period of the stay from time to time before the decision of this Honorable Court can be had, so that when the day of reckoning comes, the respondents, while having a legal right to collect, should this Honorable Court affirm the decisions below, would find an empty treasury and no assets from which to satisfy its judgment.

It is respectfully submitted that this Honorable Court should, therefore, by its direction protect these respondents by requiring the additional security to be entered to indemnify these respondents, as prayed for in this petition.

All of which is most respectfully submitted.

HORACE PETTIT,
Counsel for Respondents.

February 15, 1908.

COMMONWEALTH OF PENNSYLVANIA, }
COUNTY OF PHILADELPHIA, } *ss.:*

FREDERICK A. BLOUNT, being duly sworn according to law, deposes and says that he resides in Germantown, Phila. Pa., and that prior to February 15,1908,he was of lawful age, and that on February 15, 1908, he served a copy of the annexed brief on behalf of respondents, the Victor Talking Machine Company and United States Gramophone Company, for additional security, etc., upon Louis Hicks, of 71 Nassau street, New York, N. Y., by depositing said copy of said brief on behalf of respondents, enclosed within a sealed envelope addressed to Louis Hicks, Esq., of 71 Nassau street, New York, N. Y., in the registered mail of the United States at the Post Office in Philadelphia, Penna., and received for the same United States Post Office registered receipt for letter No. 86,332, which is attached hereto and upon which he has placed his initials and this date, namely, 2/17/08.

Sworn to and subscribed before me this 17th day of February, A. D. 1908. } FREDERICK A. BLOUNT.

ALEXANDER PARK,
(SEAL) *Notary Public.*
604 Stephen Girard Bldg., Philadelphia.
Commission expires February 6, 1909.

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Supreme Court of the United States.

LEEDS & CATLIN COMPANY, Petitioner, AGAINST VICTOR TALKING MACHINE COMPANY and UNITED STATES GRAMOPHONE COMPANY, Respondents.	October Term, 1907. Nos. 307 and 308.

Brief on behalf of Leeds & Catlin Company, Petitioner, opposing Respondents' motion for an increase in the amount of the bond, given as security upon a partial stay of the injunction pending appeal.

The motion is opposed upon the following grounds:

FIRST.—This Court has *invariably* held that the amount of a bond to be given as security under an order suspending an injunction pending appeal is a matter to be determined by the judge below; and that the discretion thus exercised by him will not be reviewed by this Court. Equity Rule 93 was promulgated to settle the practice accordingly and thus to save the time of this Court (see authorities cited under POINT ONE, *infra*, p. 8).

SECOND.—Under Section 7 of the Act of March 3, 1891, providing for an appeal from an interlocutory decree for an injunction, the granting of a stay and the requiring of a bond and the fixing of the amount thereof, rest in the discretion of the Court below. Such discretion will not be reviewed either by this Court or by the Circuit Court of Appeals (see authorities cited under POINT TWO, *infra*, p. 12).

THIRD.—This Court will presume that, when the judge below fixed the amount of the bond, every fact was presented to him that could have been; and will not review the exercise of his discretion. When the Circuit Court granted the partial stay and fixed the amount of the bond it had in view every consideration urged in support of this motion (see discussion and authorities cited under POINT THREE, *infra*, p. 13).

FOURTH.—The allegations of the petition, and affidavits in support thereof, upon this motion, are based upon surmise and conjecture and are shown to be untrue by the opposing affidavits of Mr. E. F. Leeds and Mr. C. T. Fowler. The motion is based upon profits alleged to have been made. It is shown that there has been a serious *loss* and *no* profit; and that there is no showing of damage suffered by respondents (see discussion of facts under POINT FOUR, *infra*, p. 15.)

FIFTH.—During the period of the partial stay of the injunction, the Leeds & Catlin Company has neither made nor sold any machine or article covered by the patent in suit; and has made and sold only an *unpatented* article, namely, a sound-record (see discussion and authorities cited under POINT FIVE, *infra*, p. 17).

SIXTH.—The question of the amount of the bond was fully argued and determined in the courts below (see discussion under POINT SIX, *infra*, p. 18).

SEVENTH.—Under the two writs of certiorari issued by this court to review the decrees or judgments of the Court below in both the injunction and the contempt proceeding the Leeds & Catlin Company is clearly entitled to succeed upon the merits, and has, therefore, the legal right to sell the unpatented sound-record because the patent in suit is invalid and has expired and because the manufacture and sale of the unpatented record cannot, under the decisions of this Court, be held an infringement of the patent (see discussion and authorities cited under POINT SEVEN, *infra*, p. 20).

EIGHTH.—To grant this motion would give to the patentees the benefit of a patent upon the unpatented sound-record, contrary to the clear holding of this Court in the Morgan Envelope Company case (152 U. S., 425, 432), following *Wilson* v. *Simpson*, 9 How., 109, 125, that such result is not to be permitted (see authorities cited under POINT EIGHT, *infra*, p. 21).

NINTH.—The Leeds & Catlin Company is financially responsible, having fixed assets amply securing the respondents. The working capital of the company should not under the circumstances of this case and at this period of financial stringency be further tied up, since such action would force a suspension of the business of the company and result in irreparable injury, for which no redress whatever can be had (see discussion under POINT NINTH, *infra*, p. 22).

TENTH.—Judge Townsend in the Circuit Court, denied a motion to increase the bond of $10,000

given to suspend entirely the decree for injunction pending appeal in the injunction suit (see discussion under POINT TEN, *infra*, p. 23).

CONCLUSION.—The motion should be denied and, should the practice of this Court permit, the Leeds & Catlin Company requests that a hearing on the merits upon both branches of the case be had in April of this year (*infra*, p. 23).

Claims 5 and 35 of the patent in suit, being the only claims involved, read as follows:

> "5. The method of reproducing sounds from a record of the same, which consists in vibrating a stylus and propelling the same along the record by and in accordance with the said record, substantially as described.
>
> "35. *In* a sound reproducing apparatus consisting of a traveling tablet having a sound record formed thereon and a reproducing stylus shaped for engagement with said record and *free to be* vibrated and *propelled* by the same, substantially as described."

Claim 35 is meaningless and both claims are invalid since they claim the function of a machine (See discussion, *infra*, p. 7).

Statement.

These two causes (Nos. 307 and 308) come here by virtue of two writs of *certiorari* granted by this Court. In No. 307 (injunction proceeding) the ground of the petition for writ of *certiorari* was, under the authority of *Harriman* v. *Northern Securities Co.*, 197 U. S., 244, 286 and cases cited, that, although the decree was interlocutory, "the record presented the whole case to that Court (Circuit Court of Appeals) in such wise that it might properly have been finally disposed of in terms by its decree in accordance with the well settled rule

upon that subject," and the bill dismissed (see petition for writ of *certiorari*, pp. 2, 40), the contention being that the patent in suit had expired by reason of the expiration of prior foreign patents for the same invention, that the two claims in suit, Nos. 5 and 35, are invalid as being claims for the function of a machine, that the claims in suit are void because of more than two years prior public use, because of abandonment and because of clear anticipation by prior patents, all being pure questions of law, as fully shown in the petition for writ of *certiorari* and brief thereto annexed. Inasmuch as this Honorable Court, upon a consideration of the record and briefs upon the petition for writ of *certiorari*, granted the writ in accordance with the practice followed in the *Harriman* case, it would seem that in view of the decisions of this Court supporting the defenses referred to, the Circuit Court and the Circuit Court of Appeals should have dismissed the bill, and that such action by this Court may reasonably be expected to take place.

In No. 308 (contempt proceeding) the ground of petition for writ of *certiorari* was in the words of Judge Wallace, who dissented in the Circuit Court of Appeals, that:

> "Such a rule of infringement as is adopted by the majority opinion not only extends the monopoly of the patented to an unprecedented extent, but is subversive of the right of a purchaser of the patented thing to realize its fair measure of usefulness by making necessary reparations or changes by way of improvement" (T. No. 308, p. 95).

The contempt proceeding involves the right of the Leeds & Catlin Company to make and sell an *unpatented* article, to wit, a sound record. The injunction proceeding involves the invalidity and expiration of the patent itself, and of the two

claims thereof in suit Nos. 5 and 35. In the two petitions for the granted writs of *certiorari*, being Nos. 742 and 743 of October Term, 1906, the important questions of the patent law involved are briefly set forth with reference to the decisions bearing thereon.

This motion relates solely to the *amount* of the security required by the Court below, in the exercise of its *discretion*, upon *partially* staying the injunction, pending appeal. The stay permits the Leeds & Catlin Company to sell, pending appeal, *only* the *unpatented* sound-record. It does not permit the making or selling of the sound-reproducing machine of the patent in suit and it is not claimed that the Leeds & Catlin Company has made or sold, or is permitted, under the stay, to make or sell such machine.

As shown in the two petitions for the two writs of *certiorari* granted herein by this Court, the questions of patent law involved are of great, general importance upon which great doubt and diversity of opinion existed among the Judges of the Courts below.

As shown in the affidavits opposing this motion, (*a*) the amount of the security was fixed in the Circuit Court after full argument and consideration of all the facts and circumstances of the case, which have in no way changed; and (*b*) the allegations of fact made in support of this motion are untrue.

Furthermore, *upon the merits*, there can be no doubt, under the authorities cited in support of the two petitions for the granted writs of *certiorari*, but that the Leeds & Catlin Company has the legal right to make and sell upon the open market the *unpatented* sound-record, not only because the patent in suit is invalid and has expired, but also because, under the repeated and uniform decisions of this Court, as Judge Wallace said in the Circuit

Court of Appeals (T. No. 308, p. 94), the Leeds & Catlin Company has committed no infringement whatever of the claims in suit, 5 and 35 of the patent, claim 5 being, moreover, clearly void, as Judge Wallace said (T. No. 308, p. 94), as being a claim for the function of the machine of claim 35. Claim 35 is also invalid for the same reason, the only feature in it alleged to be novel being a function, namely, a stylus "*free to be propelled,*" there being no specification in the claim of the mechanism by which the freedom of propulsion is obtained and the machine illustrated and described in the specification being concededly the invention of another than the patentee, Berliner (see petition for writ of *certiorari* in No. 307, being No. 742 of October Term, 1896, at pp. 34-36, and *Westinghouse* v. *Boyden Co.*, 170 U. S., 537, 554; *Tyden* v. *Ohio Co.*, 152 Fed., 183, 185; *Manhattan Co.* v. *Helios Co.*, 135 Fed., 785, 789; *Cleveland Co.* v. *Detroit Co.*, 131 Fed., 740, 749). Claim 35, moreover, is meaningless. It starts to claim something "in a sound reproducing apparatus," but, after describing the apparatus, omits to state what is claimed (see discussion and cases cited at p. 36 of said petition for writ of *certiorari*).

Finally, the Leeds & Catlin Company has, pending the stay, sold the unpatented sound-records for export or subject to restrictions, set forth upon a label, attached to each record, limiting the use of such record to "mechanical feed" machines, not covered by the patent, and to replacement, by way of repair, of broken or worn-out records of machines made and sold with records under the patent in suit, acts which the Courts below conceded were not infringements of the patent. The machines of the patent in suit have always been sold by the patentees without restriction of any kind as to the use thereof.

It should, perhaps, be remarked that in the rec-

ord of the injunction suit (No. 307) the order partially staying the injunction pending appeal from the contempt order does not appear as part of that record. On the other hand, the order partially staying the injunction pending review by the Appellate Courts of the contempt order, which appears in the contempt record (No. 308, p. 77) is not properly before the Court in consideration of the judgment or decree for contempt. There is no appeal from the order partially staying the injunction and the order is not appealable. It is difficult to see, therefore, how that order can be brought before this Court for consideration in the contempt proceeding. It was an order resting entirely in the discretion of the Circuit Court. Possibly these questions may be the reason why this motion has been entitled in both the injunction and contempt proceedings, which, however, are separate and distinct, even though the record in the injunction proceeding forms part of the record in the contempt proceeding.

POINT ONE.

This Court has invariably held that the amount of a bond to be given as security under an order suspending an injunction pending appeal is a matter to be determined by the Judge below; and that the discretion thus exercised by him will not be reviewed by this Court. Equity Rule 93 was promulgated to settle the practice accordingly and thus to save the time of this Court.

This point is settled by numerous decisions of this court and no case is cited by respondents or can

be found where this court has reviewed the discretion of the judge below fixing the amount of a bond to be given as security under an order staying an injunction pending appeal in accordance with the provisions of Equity Rule 93.

In *Leonard* v. *Ozark Land Co.*, 115 U. S., 465, this court, referring to an application for a modification of an injunction made in advance of the final hearing of the appeal upon the merits, said:

> "Finding that such a practice, if permitted, would oftentimes *involve an examination of the whole case,* and necessarily take much time we promulgated the present Equity Rule 93, which is as follows:
>
> > 'When an appeal from a final decree, in an equity suit, granting or dissolving an injunction, is allowed by a justice or judge who took part in the decision of the cause, he may, in his *discretion,* at the time of such allowance, make an order suspending or modifying the injunction during the pendency of the appeal, *upon such terms* as to bond or otherwise *as he may consider proper* for the security of the rights of the opposite party?"

The motion was accordingly denied.

In *Hovey* v. *McDonald*, 109 U. S., 150, 161, it was likewise held that Equity Rule 93 had been adopted to facilitate the exercise by the court below of the discretionary power to suspend or modify an injunction pending appeal. This court there said (p. 161):

> "But it is a discretionary power, and its exercise or non-exercise is not an appealable matter."

In *American Strawboard Co.* v. *Indianapolis Water Co.*, 81 Fed., 423, the Circuit Court of Appeals, referring to *Leonard* v. *Land Co.*, 115 U. S.,

465, said that by Equity Rule 93 the Supreme Court had

> "established the rule that in general the Appellate Court would not, pending the appeal, and in advance of a decision by that court upon the merits, interfere with the discretion lodged with the trial judge. This conclusion is bottomed on manifest grounds of propriety. *In most cases it would be impossible for the Appellate Court properly to act in the premises without a careful review of the case upon the merits, which could not fitly be had upon the hearing of a motion.*"

In *Crown Co.* v. *Standard Co.*, 136 Fed., 184, the Circuit Court of Appeals, citing *Martin* v. *Hazard Co.*, 93 U. S., 302, and section 7, Court of Appeals Act, June 6, 1900, held that the Appellate Court would not interfere with the judgment of the judge below exercised in fixing the amount of the bond pending appeal from an order granting an injunction.

In *Greenbay Co.* v. *Norrie*, 118 Fed., 923, 924, Judge Townsend, referring to the *Leonard* and *Horcy* cases above cited, said:

> "But as, in practice, the exercise of it would require *the examination of the record in many cases*, the Supreme Court adopted Equity Rule 93, leaving to the determination of the trial judge at the time the appeal is allowed, the question whether the effect of the injunction should be suspended or not pending the appeal (*Leonard v. Land Co. supra*)."

The cases cited by counsel for respondents in support of this motion are cases relating mostly to supersedeas bonds given to stay execution of a judgment or decree for a *specified amount* and not to bonds given to stay an injunction pending appeal. Such bonds are regulated by Supreme Court Rule 29 and not by Equity Rule 93. However, in all

cases where the amount of the supersedeas bond *was left* by Supreme Court Rule 29 *to be determined by the trial judge,* the authorities uniformly hold, in accordance with the rule stated in the head note to *Jerome* v. *McCarter,* 21 Wall., 17, as follows:

> "1. The *amount* of a supersedeas bond as well as the sufficiency of the security are matters to be determined by the judge below under the provision of the 29th rule.
> "2. The *discretion* thus exercised by him will not be interfered with by this court."

In *Jerome* v. *McCarter, supra,* the motion was to increase the amount of a bond upon the ground that the cause could not be reached for hearing for two years and that the bond which had been fixed at $10,000 was inadequate, the decree of foreclosure being for $1,057,686. The motion was accordingly denied and the court stated in its opinion that it would "not attempt to direct or control the discretion" of the trial judge in such matters, and added that if this court could be called upon "to inquire into the action of the justice with respect to the amount of the security required, we may as to the pecuniary responsibility of the sureties at the time they were accepted."

The rule in regard to the discretionary part of supersedeas bonds is concisely stated in *Ex parte French,* 100 U. S., 1, 5, as follows:

> "as to the damages on account of the detention of the property, we decided in *Jerome* v. *McCarter* (21 Wall., 17) that the amount of the bond rested in the discretion of the judge or justice who signed the citation or allowed the supersedeas, and would not be reconsidered here."

POINT TWO.

Under Section 7 of the Act of March 3, 1891, providing for an appeal from an interlocutory decree for an injunction, the granting of a stay and the requiring of a bond and the fixing of the amount thereof, rest in the discretion of the Court below. Such discretion will not be reviewed either by this Court or by the Circuit Court of Appeals.

The rule established, as shown under Point One, by Equity Rule 93 and the decisions of this Court, was incorporated into section 7 of the act of March 3 of 1891, providing for appeal to the Circuit Court of Appeals from an interlocutory decree.

In *Haberman Mfg. Co.*, 147 U. S., 525, this Court held that the granting of a stay of an injunction pending appeal is, under section 7 of the act of March 3, 1891, not a matter of right, but is a matter of discretion, and that

> "such discretion of that Court (Circuit Court) cannot be controlled by a writ of mandamus from this Court."

In *Crown Co.* v. *Standard Co.*, 136 Fed., 184, the Circuit Court of Appeals similarly held that under section 7, Court of Appeals Act, June 6, 1900, the discretion of the judge below exercised in fixing the amount of bond on appeal, from an interlocutory decree granting an injunction and accounting would not be reviewed.

The order of the Court below partially suspending the injunction is not affected by, but continues under, the writ of *certiorari* issued by this Court, which continues the appeal (*Staffords* v. *King*, 90

Fed., 136, 141 (C. C. A.); and see *Hubbard* v. *Tod*, 171 U. S., 474, 494).

As above explained (p. 4) in the injunction suit (No. 307) the writ of *certiorari* was granted to review an interlocutory decree in an equity suit in accordance with the prayer of the petition therefor upon the authority of *Harriman* v. *Northern Securities Co.*, 197 U. S., 244, 286, and cases cited, the record presenting the whole case in such wise that the Court below might properly have finally disposed of it by decree dismissing the bill in accordance with the well settled rule upon that subject.

POINT THREE.

This Court will presume that, when the Judge below fixed the amount of the bond, every fact was presented to him that could have been; and will not review the exercise of his discretion. When the Circuit Court granted the partial stay and fixed the amount of the bond it had in view every consideration urged in support of this motion.

In *Jerome* v. *McCarter*, 21 Wall., 17, 31, this Court, referring to the exercise by the trial judge of his discretion in fixing the discretionary amount of a supersedeas bond, said:

> "And we will presume that when he acted every fact was presented to him that could have been."

As explained in the opposing affidavit of Mr. Hicks upon this motion (p. 19, fol. 55), Judge La-

combe, being in great doubt upon the question of law involved on the motion to punish for contempt, stated, in his opinion (T. 308, p. 74), that a stay would be granted pending appeal and upon the settlement of the order stated that seven judges out of ten would have denied the motion (Affidavit, Hicks, p. 19, fol. 55), and immediately, upon motion made, granted the order partially staying the injunction pending appeal in the contempt proceeding (T. No. 308, p. 77) without limitation as to the Court or Courts in which the review was to be had, it being the intention to obtain, if permitted, a decision by the Supreme Court upon the important question of law involved (Affidavit, Hicks, p. 19, fol. 56), in which effort, as explained in the affidavit of Mr. Hicks (p. 20), the judges of the Circuit Court of Appeals promptly supported him. Without exception, the judges below considered that the questions involved should be passed upon by this Court, and promptly assisted in securing such desired result. Judge Lacombe's decision granting the motion was necessary to a review by the appellate courts. All the circumstances of the case, including the facts and the merits, were carefully considered by Judge Lacombe and also by the Circuit Court of Appeals, and nothing is urged here in support of this motion which was not before Judge Lacombe at the time when he fixed the amount of the bond under the order partially staying the injunction. Judge Townsend fixed the bond pending appeal from the decree for injunction at $10,000, and, after full argument upon affidavits, *denied a motion to increase that bond*, and Judge Lacombe reached the same result, in the exercise of his discretion, that Judge Townsend had previously reached in the exercise of his discretion (Affidavit, Hicks, p. 18, fol. 53; p. 19, fol. 56).

POINT FOUR.

The allegations of the petition, and affidavits in support thereof, upon this motion, are based upon surmise and conjecture and are shown to be untrue by the opposing affidavits of Mr. E. F. Leeds and Mr. C. T. Fowler. The motion is based upon profits alleged to have been made. It is shown that there has been a serious loss and no profit; and that there is no showing of damage suffered by respondents.

The opposing affidavits of Mr. Leeds and of Mr. Fowler so conclusively show the falsity of the allegations upon which this motion for increased security is based, that the Court will see that there is no merit in the application whatever. The application is based upon alleged profits, made by the Leeds & Catlin Company through the sale of the unpatented records. Not only has the Leeds & Catlin Company sold the unpatented records for legitimate uses, as elsewhere fully shown, but the effect of the injunction, notwithstanding the partial stay, and the malicious advertisements thereof by the respondents, have caused to the Leeds & Catlin Company a loss of about $100,000 on the records in question, for which it can have no redress whatever (Affidavits, Leeds, p. 3; Fowler, p. 15). There is no evidence whatever in the moving papers upon this motion from which the Court could conclude that the respondents have suffered any damage by reason of the partial stay of the injunction permitting the sale of the unpatented record, and Mr. Leeds, in his opposing affidavit (p. 4, par. Third) proves that the respondents have

in reality, suffered no damage. It being indisputable that the respondents are not entitled to additional security upon the ground of profits, since no profits have been made, the motion should be denied because of the entire absence of any ground in support of it. The bonds already filed, aggregating $21,000, are for an amount greatly in excess of any possible injury that can be sustained by the respondents in case they should succeed upon the final hearings in this Court under the two writs of *certiorari*. Should the Leeds & Catlin Company succeed upon *either* branch of the case, the respondents would have no claim under the bonds.

Respondents offer no evidence to show that the sales of records made by the Leeds & Catlin Company would have been made by them. On the other hand, Mr. Leeds shows, in his affidavit (p. 6, fol. 17), that machines and records manufactured by several companies are upon the market. Beyond a *mere allegation* of damage, respondents adduce no evidence whatever showing damage and the only recovery that could be had on account of damage, as distinguished from profit, would necessarily be nominal damages (*Force* v. *Sawyer Co.*, 143 Fed., 894, C. C. A.). The only statement of alleged damage in the moving papers is a bare conclusion, without any fact or showing whatever in support thereof, to the effect that Geissler "estimates" the damage at a ridiculous figure set forth. If, as stated in *Karfiol* v. *Rothner*, 151 Fed., 779, a bond staying an injunction pending appeal should be based solely upon the probable profits made by the defendant, it is established that the bonds already filed are excessive, since, pending appeal, the Leeds & Catlin Company has sustained a most grievous *loss* by reason of the injunction and the malicious advertisements thereof by respondents. It is clear that there is no evidence whatever be-

fore this Court upon which to say that the discretion of the Circuit Court should be reviewed or that any bond whatever should have been or should be required.

POINT FIVE.

During the partial stay of the injunction, the Leeds & Catlin Company has neither made nor sold any machine or article covered by the patent in suit; and has made and sold only an unpatented article, namely, a sound-record.

It is shown in the opposing affidavit of Mr. Leeds (p. 7) that the records sold by the Leeds & Catlin Company are not only unpatented articles, but that they have been sold for legitimate uses, uses which concededly are not infringements of the patent in suit, namely, for export, for use on "mechanical feed-device" machines, which belong to the prior art and are not covered by the patent, and for use in replacement, by way of repair, of broken or worn-out records sold with machines made under the patent in suit. The necessity for the partial stay of the injunction is apparent, because without such partial stay the Leeds & Catlin Company would have been obliged to do a legitimate business at its peril, since, if the Victor Company or any other purchaser of records from the Leeds & Catlin Company had made what the Court considered an infringing use thereof, the Leeds & Catlin Company would be liable to a motion to punish for contempt. The vigorous dissenting opinion of Judge Wallace in the Circuit Court of Appeals (T. No. 308, p. 94) upon this branch of the case will make

clear to this Court the anomalous situation in which the Leeds & Catlin Company has been placed, preventing it from dealing in an unpatented article which was known and used before the date of the invention of the patent in suit. The rule of infringement adopted by the majority opinion, as stated by Judge Wallace, "not only extends the monopoly of the patent owner to an unprecedented extent, but is subversive of the right of a purchaser of the patented thing (the machine of the patent) to realize its fair measure of usefulness by making necessary reparations or changes by way of improvement."

Judge Wallace, as this Court may remember, decided the *Morgan Envelope Company* case in the Circuit Court (40 Fed., 577), which was affirmed in this Court (152 U. S., 425) upon the authority especially of *Wilson* v. *Simpson* (9 How., 109).

Upon the question of damage, it may be asked, what possible damage can be caused to a patentee who has, as here, received the full amount of royalty to which he is entitled upon an unrestricted sale of the patented combination, because the purchaser, who has thereby acquired the unrestricted right to use the purchased, patented combination, free from the monopoly of the patent and the patent laws of the United States, chooses to employ upon it an unpatented sound record made by himself or another instead of the one made and sold by these respondents?

POINT SIX.

The question of the amount of the bond was fully argued and determined in the courts below.

The facts in support of this statement are fully stated in the opposing affidavit of Mr. Hicks,

wherein the consideration given to the matter by Judges Townsend and Lacombe and by the Circuit Court of Appeals is fully set forth, together with affidavits and exhibits relating thereto.

The question of the amount of the bonds was fully argued in the courts below, especially before Judge Townsend and before Judge Lacombe. All the circumstances of the case, none of which have changed, were fully presented and considered by the Circuit Court which was fully informed as to all the facts and entertained the gravest doubts upon the merits. Judge Lacombe stated that seven Judges out of ten would have rendered a different decision on the question of contempt. Judge Townsend entertained great doubt, expressed in his opinion, as to the expiration of the patent. Judge Wallace in the Circuit Court of Appeals was of opinion that claim 5, one of the two claims in suit, is invalid and that Judge Lacombe's decision on the point of infringement of claim 35 should be reversed. Judge Hough also believed that the decision of this Court in the *Morgan Envelope Company* case, properly construed, would uphold Judge Wallace's opinion, but felt bound to follow certain more recent decisions of the Circuit Court of Appeals (Affidavit, Hicks, p. 17).

In the Circuit Court of Appeals, the question of the sufficiency of the security, pending the review by this Court, was raised by affidavit (Hicks, p. 25, fol. 74), and by brief (p. 27, fol. 81), and the Circuit Court of Appeals refused to permit its mandate to issue in order that the partial stay should continue in force until the final decision of this Court upon the important questions involved (p. 23).

POINT SEVEN.

Under the two writs of certiorari issued by this Court to review the decrees or judgments of the Court below in both the injunction and the contempt proceeding the Leeds & Catlin Company is clearly entitled to succeed upon the merits, and has, therefore, the legal right to sell the unpatented sound-record because the patent in suit is invalid and has expired and because the manufacture and sale of the unpatented record cannot, under the decisions of this Court, be held an infringement of the patent.

If this Court, departing from the well-settled rule established by its uniform decisions, by Equity Rule 93, and by section 7 of the Act of March 3, 1891, as pointed out, *supra*, under Points One and Two of this brief, is to entertain this motion and to enter upon a consideration of the question as to whether any bond at all should be required as a condition of the partial stay of the injunction pending the decision of this Court on the merits under the two writs of *certiorari*, and if a bond should be required, what the proper amount of the bond should be, then obviously an examination of the merits is necessary. The Circuit Court acted with full knowledge of the facts and with grave doubt upon the questions of law involved. This Court has emphasized the doubt and importance of the questions of law involved by the granting of the two petitions for writs of *certiorari*. By reason of the injunction the Leeds & Catlin Com-

pany has suffered irreparable injury and that injury should not be increased to any extent unless the reason and necessity therefor are clear. It is respectfully submitted that if this Court is to entertain this motion, and will consider the merits of the case in so doing, it will appear from a reading of the petitions and briefs in support thereof upon the applications for the two writs of *certiorari,* which were numbered 742 and 743, of the October term, 1906, that the patent in suit is invalid and has expired and that the bill of complaint should have been dismissed by the Circuit Court; and, further, that Judge Wallace's view in the Circuit Court of Appeals on the contempt proceeding was the correct view, and that Judge Lacombe should have denied the motion to punish for contempt. Such being the case no bond whatever should have been required and certainly no increase in the bonds should be required at the present time. The Court should rather, if consistent with its practice, permit the Leeds & Catlin Company to argue both branches of the case during the month of April, 1908, and thus obtain, from this Court, decisions which will finally settle the questions at issue.

POINT EIGHT.

To grant this motion would give to the patentees the benefit of a patent upon the unpatented sound-record, contrary to the clear holding of this Court in the Morgan Envelope Company case (152 U. S., 425, 432), following Wilson v. Simpson, 9 How. 109,

125, that such result is not to be permitted.

This matter has been so fully discussed in the petition for writ of certiorari in the contempt proceeding and in the brief thereto annexed, that the Court is respectfully requested to refer to the same, should it be of opinion that this motion should be entertained and the merits of the case inquired into.

POINT NINE.

The Leeds & Catlin Company is financially responsible, having fixed assets amply securing the respondents. The working capital of the company should not under the circumstances of this case and at this period of financial stringency be further tied up, since such action would force a suspension of the business of the company and result in irreparable injury for which no redress whatever can be had.

The financial responsibility of the Leeds & Catlin Company is fully shown by the opposing affidavits of Mr. Leeds (p. 8) and of Mr. Fowler (p. 15). There is no showing to the contrary, the vague allegations of the moving papers being unworthy of consideration. The respondents complain principally of sales of records made by R. H. Macy & Co. of New York City, a corporation whose responsibility is the very highest, and thus respondents

have not only the financial responsibility of the Leeds & Catlin Company, but also that of R. H. Macy & Co. (Affidavit, Leeds, p. 11, fol. 33).

POINT TEN.

Judge Townsend in the Circuit Court denied a motion to increase the bond of $10,000 given to suspend entirely the decree for injunction pending appeal in the injunction suit.

A copy of Judge Townsend's order denying such motion is annexed, at page 22, to the affidavit of Mr. Hicks, who explains that the motion was at once denied by the Circuit Judge who was familiar with the case (Affidavit, Hicks, p. 18, fol. 54).

CONCLUSION.

The motion should be denied and, should the practice of this Court permit, the Leeds & Catlin Company requests that a hearing on the merits upon both branches of the case be had in April of this year.

It is respectfully submitted, for the reasons stated, that the motion should be denied. If, in the judgment of the Court, the two branches of the case can be set for argument in April, 1908, to the end that an early decision may with certainty be

had, such disposition would be heartily welcomed by the Leeds & Catlin Company, since it has suffered irreparable injury through the pendency of these proceedings.

Dated New York, February 24, 1908.

LOUIS HICKS,
Counsel for Leeds & Catlin Company,
Petitioner.

Supreme Court of the United States.

1

LEEDS & CATLIN COMPANY, Petitioner, vs. VICTOR TALKING MACHINE COMPANY and UNITED STATES GRAMOPHONE COMPANY, Respondents.	October Term, 1907. Nos. 307 and 308.

State and County of New York, ss.:

EDWARD F. LEEDS, being duly sworn, says: I am 2
president of Leeds & Catlin Company, petitioner above named, and have been president thereof since its organization and incorporation in June, 1899. I have read the petition and affidavits of the respondents upon their motion for additional security and to my knowledge the allegations of fact, upon which the petition is based, are false and untrue. Indeed, the said allegations are so entirely false and untrue that it is not possible to believe that the petition is made in good faith. The allegations of the petition and affidavits in support thereof are based upon surmise and conjecture. The facts are contrary and the Leeds & Catlin Company 3
is fortunately in a position to make this clear to the Court as follows:

FIRST.—The Leeds & Catlin Company was organized and incorporated in June, 1899. The business of the company consisted in making and selling sound records. The Victor Talking Machine Company was not incorporated until about October 5,

1901, more than two years after the incorporation and organization of the Leeds & Catlin Company. The United States Gramophone Company has never, so far as I am aware, been known in the talking machine business. The allegations of the petition and affidavits in support thereof, to the effect that the Leeds & Catlin Company has sold its goods on the strength of the Victor Talking Machine Company's advertisements and reputation is entirely false and untrue. The Leeds & Catlin Company was well known in the trade and had acquired a high standing and reputation before the Victor Talking Machine Company came into existence. Moreover, the talking machine business was exploited in the United States and, indeed, in the world by the North American Phonograph Company, which was incorporated in August, 1888, and which continued in business until the sale of its assets to Thomas A. Edison in February, 1896. I was associated with the North American Phonograph Company in the exploitation of the phonograph business, acting in various capacities, and about the year 1892 I developed the record making and selling part of the business of the North American Phonograph Company. In 1896 I was a partner in the firm of Walcutt and Leeds, record makers, at 53 East Eleventh street, New York, the present place of business of the Leeds & Catlin Company. In December, 1897, I was interested in the incorporation of Walcutt & Leeds, Limited, a record making corporation, and in June, 1899, I caused the incorporation of the Leeds & Catlin Company. Before the incorporation of the Leeds & Catlin Company sound records made by me had acquired a reputation throughout the United States, and the Leeds & Catlin Company has done business in my sound records of the disc and cylindrical type upon the basis of the reputation which I had acquired during the many years of my experience, having been, as above shown, a pioneer in the record mak-

ing art. The truth is that the business of the Leeds & Catlin Company is independent of the business, advertisements and reputation of the Victor Company. The principal record maker, Mr. English, of the Victor Company, was in my employ as an assistant in making records, several years before the Victor Company was organized. 7

SECOND.—It is alleged in the petition and affidavits in support thereof upon this motion that the Leeds & Catlin Company has already made a profit of $111,023.60 upon the sale of disc records under the stay of the injunction. This allegation forms the basis of the petition. The allegation is made in the petition and in the affidavits without any foundation whatever. The allegation is false. The fact is that the injunction, notwithstanding the stay, has prevented the Leeds & Catlin Company from making and selling disc sound records at a profit and the Leeds & Catlin Company has, during the period of the stay of the injunction, and by reason of the effect of the injunction, suffered a loss in the sale of its disc sound records amounting to nearly $100,000. The 555,118 records mentioned in the petition and moving affidavits were sold at an average price of seventeen and one-half cents (17½c.) each or for a total of $97,145.15. The expenses of the Leeds & Catlin Company in the making and selling of said records have been over thirty-four cents (34c.) each or a total of $193,067.79, showing a loss of about seventeen cents (17c.) upon each record or a total loss of $95,922.64. This loss has compelled the stockholders of the Leeds & Catlin Company to supply for the needs of the company during the period of said stay of the injunction more than $150,000 in cash. The disc sound record which the Leeds & Catlin Company has manufactured and sold is concededly an unpatented article and the Leeds & Catlin Company has been compelled to 8 9

suffer this great loss in order that the large investment made in its plant and business may not be destroyed by reason of the injunction in question. The Victor Talking Machine Company is responsible for the loss sustained by the Leeds & Catlin Company in its business, because, notwithstanding the stay of the injunction, it has sent threatening telegrams and letters to the customers of the Leeds & Catlin Company, omitting to state that the injunction had been stayed and omitting to state that this Honorable Court has granted its two writs of certiorari to review the decisions of the courts below. For this loss caused to the Leeds & Catlin Company by reason of the injunction and by reason of the threats and advertisements by the Victor Company to the trade thereof, the Leeds & Catlin Company has no redress whatever in case this Court, upon review under the two writs of certiorari, holds either that the patent has expired or is invalid or that the selling of an unpatented article is not an infringement of a patent for a machine adapted to reproduce sound from the unpatented article, namely, the sound record.

THIRD.—The basis of this petition for additional security is the false allegation that Leeds & Catlin Company has made a profit instead of a loss in the sale of its sound records during the period of the stay of the injunction. The petition and affidavits in support thereof make vague allegations to the effect that the Victor Company has sustained damage by reason of the sales of sound records by the Leeds & Catlin Company. No proof of damage whatever is produced. It is alleged that the sales of records by the Victor Company has decreased, but the facts and figures to prove this are not set forth. It is alleged that the loss of sales by the Victor Company is due to the continued sales by the Leeds & Catlin Company, but such conclusion is impossible because the sales of the Leeds & Cat-

lin Company have decreased by reason of the in- 13
junction, and if there were any logical connection between the sales by the Leeds & Catlin Company and the sales by the Victor Company, the sales by the Victor Company would have increased. Furthermore, two record making companies, the American Record Company and the International Record Company, each of which was engaged in selling disc sound records like those sold by the Victor Company, have ceased to do business since the granting of the injunction in this case against the Leeds & Catlin Company. The American and the National Companies were enjoined from making such records under the Jones patent, the same pat- 14
ent under which the Victor Company was enjoined from making such records and at the suit of the American Graphophone Company the American Record Company went out of business subsequent to January 14, 1907, and the International Record Company went out of business subsequent to June 11, 1907. If the conclusion of the Victor Company upon this motion be sound in regard to its alleged damages, it would follow that the Victor Company's sales of records would have increased by reason of the cessation of sales of records by the International and the American Record Companies. The Victor Company, however, alleges that its sales have decreased. Furthermore, there is no showing 15
in the petition or the moving affidavits as to what possible damage the Victor Company can suffer by reason of the sales of unpatented records by the Leeds & Catlin Company. The Victor Company makes and sells its records under the Jones patent owned by the American Graphophone Company and not under the Berliner patent here in suit, which has no claim whatever covering a sound record. There is nothing to show the cost to the Victor Company of the making of its sound records, nor the royalty which it pays to the Ameri-

16 can Graphophone Company under the Jones patent for the making of its sound records, nor the profit, if any, which the Victor Company makes upon the sale of its records, nor is there anything to show that the sound records sold by defendant have ever been used during the stay of the injunction in infringement of the patent in suit. As stated upon the label upon defendant's sound records, they have been sold for use on mechanical feed device machines, which concededly are not within the claims of the patent in suit and for replacement of any broken or worn out record upon a machine sold by the Victor Company or its licensees under the pat-
17 ent in suit. The right to sell sound records for repair of a patented combination is undeniable and has not been enjoined. Defendant company is engaged in the manufacture of mechanical feed machines and has closed a contract to sell 5,000 such machines, together with its disc sound records. Other companies have been putting upon the market mechanical feed machines employing disc sound records. The American Graphophone Company is a competitor of the Victor Company and owns and controls the patent under which the Victor Company makes its disc sound records, and the American Graphophone Company manufactures and sells machines employing disc sound records. It is as
18 probable that the Leeds & Catlin Company's records have been employed on machines of the American Graphophone Company and all other companies as it is that they have been employed upon machines of the Victor Company. The fact is that the Victor Company has in no way been damaged by the sales of unpatented records made by the Leeds & Catlin Company and this undoubtedly is the reason why the petition and moving affidavits in support thereof present no proof whatever of damage.

FOURTH.—It is not charged in the petition or 19
moving affidavits in support thereof that the Leeds & Catlin Company has made or sold, during the stay of the injunction, the sound reproducing machine of the patent in suit. The fact is that the Leeds & Catlin Company has never manufactured any such machine and the injunction was issued against the Leeds & Catlin Company solely upon the basis of a single machine sold by the Leeds & Catlin Company which it had received, together with a few others, from the manufacturer thereof in part settlement of an account. It is charged only that the Leeds & Catlin Company has made and sold unpatented sound records. As stated 20
upon the label affixed to each sound record sold by the Leeds & Catlin Company during the stay of the injunction, said records have been sold for use on mechanical feed machines, which concededly are not an infringement of the patent in suit, but belong to the prior art and for use in replacement of any worn out or broken record of any machine upon the market not made in infringement of the patent in suit. Such label is worded in accordance with the order of Judge Lacombe staying the injunction (T. No. 308, p. 77), except that the Leeds & Catlin Company restricts the use of its records, as aforesaid, while the permission granted by Judge Lacombe was broadly to sell the records for use 21
upon any machine licensed under the patent in suit which had been sold, together with a sound record. Pending the determination of the questions involved upon this appeal, the Leeds & Catlin Company has taken the utmost precaution to confine its business to what was concededly not in violation of the Berliner patent in suit. The stay of the injunction was necessary, however, to enable the Leeds & Catlin Company to make and sell unpatented disc sound records according to its conceded right without running the risk of being in contempt

of court because some of the records made and sold might be used upon machines sold by the Victor Company. In other words, the injunction had been interpreted so as to compel the Leeds & Catlin Company to do a business in an unpatented article at its peril. Upon this motion I understand the Victor Company to contend that it is entitled to recover all profits and damages accruing from the sale and use of an article not covered by the patent in suit.

FIFTH.—Leeds & Catlin Company has, as shown in the petition, filed bonds aggregating $21,000, to secure the respondents. Such security was, I am informed by counsel for Leeds & Catlin Company, regarded by the Circuit Court as amply sufficient. The Leeds & Catlin Company is financially responsible and will continue to be so unless its assets are destroyed by the injunction in this suit and the action of the respondents in advertising the injunction to the trade and threatening the business of the Leeds & Catlin Company without explaining to the trade the condition of the litigation and the limit of the injunction. The Leeds & Catlin Company has real estate consisting of land and buildings at Middletown, Conn., of the fair value of $375,000. It has machinery and a plant at the Middletown factory of the fair value of $500,000. It has machinery in New York of the value of over $70,000. It has merchandise and accounts receivable, according to its last statement, of over $77,000. It owns patents and patent rights having a high valuation. It will be seen that the assets of the company are of a fixed nature and that the allegations of the petition and moving affidavits in support thereof, to the effect that the Leeds & Catlin Company has an inexpensive plant, is subject to small expense, has nothing to lose in this litigation, is dividing profits (which it never made) to escape liability, is preparing to flood the market

with records alleged to be infringing (but which 25
are unpatented) and is not financially responsible, are false and reckless allegations made without foundation or regard to truth.

SIXTH.—As above shown, the Leeds & Catlin Company is financially responsible and ample security has already been given to secure respondents. To require the Leeds & Catlin Company, during the present period of financial stress, to furnish additional security would result in disaster to the company and to its stockholders, who have already paid out so many thousands of dollars to keep the company in business before the public pending the decision of this Honorable Court upon 26
the questions involved. The talking machine companies generally have felt the stress of the present financial conditions and some of the largest and most responsible have been obliged to discontinue the manufacture of goods because of inability to secure cash with which to carry on their manufacture and operations. The Leeds & Catlin Company believes that upon the merits of the two branches of this case now before this Honorable Court for review under its two writs of certiorari, the patent in suit has expired and is invalid and that the bill of complaint will be dismissed, and, furthermore, that it will be held that the sale of the unpat- 27
ented sound record is not an infringement of the claim for the sound reproducing machine of the patent in suit; and that the greatest injustice has been done to the Leeds & Catlin Company by reason of the injunction and the manner in which the Victor Compay has, through advertising, pending the stay and pending the decision of this Honorable Court under the writs of certiorari, endeavored, before a final decision can be reached, to destroy utterly the assets and business of the Leeds & Catlin Company. Indeed, the object of this motion is to set aside the stay by requiring the Leeds

& Catlin Company, in the present financial stringency, to furnish additional security.

SEVENTH.—There are a few other misleading and false allegations set forth in the petition and affidavits in support thereof, of which notice should be taken, for they are clearly intended to mislead the Court and thereby prejudice the Court against the Leeds & Catlin Company. In the affidavit of Royal, for instance, it is alleged that the records of the Leeds & Catlin Company are like the "legitimate records," thereby implying imitation. The truth is that the patent in suit has no claim for a sound record and no sound record upon the market is made under the patent in suit. The Victor Company made its records in infringement of the Jones patent of the American Graphophone Company. The Leeds & Catlin Company makes its records according to a process constituting an invention not infringing upon or within the scope of any patent now in force, a process radically different from the process of the Jones patent employed by the Victor Company. In the affidavit of Geissler a similar attempt is made to misrepresent and to lead the Court to believe that the Leeds & Catlin Company is engaged in counterfeiting records of other concerns. It is true that the Leeds & Catlin Company has copied records made in Paris, France, by one who was formerly a partner of deponent, but it is not true that the Leeds & Catlin Company has ever copied a record made by a concern or person doing business in the United States. There is no allegation to the effect that the Leeds & Catlin Company ever copied a record made by the Victor Company and it will be clear to the Court that the false and misleading allegations of the petition and affidavits in support thereof are intended to mislead the Court, and to prejudice the Court against a defendant that has con-

ducted its business as an honorable and responsible manufacturer. Throughout the petition and moving affidavits the language is framed so as to lead the Court to believe that sound records are made in accordance with the claims of the patent in suit. As in other instances, the language employed is artful. As shown, no sound records are made in accordance with the patent in suit. 31

EIGHTH.—It is attempted by the petition and affidavits in support thereof to assign a cash value of $800,000 to the patent in suit. It appears from the testimony given by Charles K. Haddon, Treasurer of the Victor Talking Machine Company, in the suit of these respondents against the American Graphophone Company, that the Berliner Gramophone Company sold the right to operate under its patents to the Victor Company for 8,000 shares of stock. The Berliner patents were many in number and concededly many of the claims of the patent in suit have expired by reason of the expiration of prior foreign patents for the same invention, this being one of the grounds upon which the Leeds & Catlin Company contends that the patent in suit expired before this suit was begun and that the bill should have been dismissed by the Circuit Court. 32

NINTH.—The principal ground of complaint set forth in the petition and affidavits in support thereof seems to be the sale of records by R. H. Macy & Co., of New York City, a most responsible company. In the responsibility of R. H. Macy & Co. the respondents have the best possible security, should they eventually succeed, for all records of the Leeds & Catlin Company sold by R. H. Macy & Co. in infringement of any right of the respondents under the patent in suit. R. H. Macy & Co. purchase and sell talking machines and records of all kinds. 33

34 TENTH.—It will be seen from Exhibit A, annexed to Kennedy's affidavit in support of the petition, that in accordance with the label upon each of the Leeds & Catlin Company's records, the "record is sold for use on all *mechanical feed machines* and upon all licensed Victor, Columbia and Zonophone machines and all other machines licensed under U. S. patent No. 534,543, *in replacement of any worn out or broken record thereof.* Any other use of this record will be a violation of the conditions under which it is sold and an infringement." Judge Lacombe stayed the decree and injunction (T. No. 308, p. 77) "in so far as the same have been con-
35 strued by this Court on the motion for contempt to enjoin and restrain defendant from selling disc sound records for use in the United States upon machines sold by complainants and their licensees, together with disc sound records." The label of the Leeds & Catlin Company is in accordance with the stay, except, as above stated, that the language of the stay permits a wider use of the record than does the restriction upon the label. The use of a record in accordance with the restriction upon the label would not, under Judge Lacombe's decision, be an infringement of the patent in suit. The notice upon the label is absolutely necessary to enable the Leeds & Catlin Company to
36 sell the unpatented record without running the risk of being charged with contempt upon the ground that someone who has not purchased a machine and record from the Victor Company or its licensees has constructed a machine infringing on the patent in suit and purchased from the Leeds & Catlin Company a record for use thereon. It is because of the necessity of the situation and in order to keep within the decision of the Court that the Leeds & Catlin Company has been obliged to sell its records in accordance with the restrictions of the label attached thereto. The allegations of

the petition and moving affidavits to the effect that 37
the statements upon the label, in accordance with which the records are sold, is misleading or is intended to mislead, are thus clearly shown to be untrue. They are statements of what the Leeds & Catlin Company concededly has the right to do and they are statements rendered necessary to protect the Leeds & Catlin Company from the unceasing endeavors of the Victor Company to entrap it in proceedings for contempt and to crush and destroy its business.

ELEVENTH.—With reference to the allegations of the petition that the records of the Leeds & Cat- 38
lin Company are inferior, while it is difficult to see what materiality this allegation has upon the motion, deponent feels it his duty to point out to the Court that the allegations are untrue. The process by which the Leeds & Catlin Company manufactures its sound records is superior to that employed by the Victor Company or any other record making company in the United States and tests made show that the records of the Leeds & Catlin Company are the equal and probably the superior of other records upon the market. The records of the Leeds & Catlin Company have acquired a high reputation for excellence and thou- 39
sands of records of the Leeds & Catlin Company have been sold for use in foreign countries, a part of the business of the Leeds & Catlin Company which the Circuit Court of Appeals considered could not involve any infringement of the patent in suit. Judge Hough in the Circuit Court of Appeals said (T. No. 308, p. 92), "the foreign trade of the plaintiff in error is not interfered with by the injunction nor affected by the order under review."

TWELFTH.—In conclusion, the Leeds & Catlin Company and its stockholders are most anxious

for an early decision by this Honorable Court of the important questions involved in the two branches of the suit now before th Court under the two writs of certiorari. The Leeds & Catlin Company hereby consents, should the Court be so advised, that both branches of the suit be advanced and set for hearing in April of this year.

EDWARD F. LEEDS.

Subscribed and sworn to before me this 20th day of February, 1908.

FRANK Z. DEMAREST,
[NOTARY'S SEAL.] Notary Public,
New York County, N. Y.

SUPREME COURT OF THE UNITED STATES.

LEEDS & CATLIN COMPANY, Petitioner, vs. VICTOR TALKING MACHINE COMPANY and UNITED STATES GRAMOPHONE COMPANY, Respondents.	October Term, 1907. Nos. 307 and 308.

State and County of New York, ss.:

CHARLES T. FOWLER, being duly sworn, says: I am an accountant and bookkeeper employed by the Leeds & Catlin Company. It has been my duty to examine the books of the company and to report therefrom as to the assets of the company, sales of sound records, receipts from such sales and expenses of manufacture, marketing and selling said sound records.

I am familiar with the sales of sound records made by the Leeds & Catlin Company during the

period of stay of the injunction herein. Said sound 43
records were sold at an average price of about 17½c. each. The total receipts from the sale of said sound records within the United States during the period of said stay, from January 11, 1907, to January 31, 1908, amounted to $97,145.15. The cost to the Leeds & Catlin Company of making, marketing and selling said sound records was over 34c. each, and the total cost was $193,067.79, or about $95,922.64 in excess of the amount received by the Leeds & Catlin Company upon the sale thereof. As appears from the foregoing statement, the Leeds & Catlin Company has sustained a loss of nearly $100,000 in the making and selling of 44
disc sound records during said period of said stay.

The great loss sustained by the Leeds & Catlin Company in the making and selling of said sound records has been due to the injunction granted in this suit and to the advertising of the said injunction by the Victor Talking Machine Company, accompanied by threats and without mention of the fact that the said injunction had been stayed and that this court issued its two writs of certiorari to review the decisions of the courts below with reference to the validity and expiration of the patent in suit and with reference to the right of the Leeds & Catlin Company to sell the unpatented sound record. 45

By reason of the loss aforesaid sustained by the Leeds & Catlin Company in the making and selling of said sound records within the United States during the period of said stay, the stockholders of the company have been obliged to pay into the company over $150,000 in cash to prevent the total loss of the business of the company and the destruction of its assets before a decision is had by this Honorable Court upon the questions to be reviewed under the said two writs of certiorari.

The Leeds & Catlin Company has real estate consisting of land and factory buildings thereon at

46 Middletown, Conn., having a value of $375,000. The machinery and plant of the company in said buildings are valued at over $500,000. The machinery of the company in New York has a fair value of over $70,000. It has merchandise and accounts receivable of over $77,000. It owns patents and patent rights of great value. As will be seen from the foregoing statement, the assets of the company are principally fixed assets, offering ample security for the payment of the obligations of the company.

I have read the annexed affidavit of Edward F. Leeds, president of Leeds & Catlin Company, and the facts therein set forth are true according to the
47 information and knowledge which I have derived from the books of the company.

The records sold by the Leeds & Catlin Company during the period of said stay have been sold subject to the restriction set forth upon the label attached thereto, that the said records should be used upon mechanical feed-device machines or in replacement of broken or worn out records of machines sold and licensed under the patent in suit.

In view of the present financial stringency, of the great loss sustained by the Leeds & Catlin Company by reason of the injunction and the advertisement thereof and threats to the trade made by the Victor Company, a requirement by this court of an
48 increase of the bonds already filed, aggregating $21,000, would result in such serious embarrassment to the Leeds & Catlin Company that its business and assets, of great value, as above shown, would be lost and almost destroyed before a decision is had from this court upon the questions brought up for review under the two writs of certiorari.

CHARLES T. FOWLER.

Subscribed and sworn to before me
this 20th day of February, 1908.

FRANK Z. DEMAREST,
Notary Public,
[NOTARY'S SEAL.] New York County, N. Y.

LEEDS & CATLIN COMPANY, Petitioner, vs. VICTOR TALKING MACHINE COMPANY and UNITED STATES GRAMOPHONE COMPANY, Respondents.	October Term, 1907. Nos. 307 and 308.

State and County of New York, ss.: 50

LOUIS HICKS, being duly sworn, says: I am a member of the bar of this Honorable Court and am counsel for the Leeds & Catlin Company in both branches of this suit now before this court under its two writs of certiorari granted May 27, 1907.

Three bonds for $10,000, $10,000 and $1,000 respectively were fixed by the Circuit Court of the United States for the Southern District of New York by Judges Townsend and Lacombe, who respectively rendered the decisions in the Circuit Court in the injunction and in the contempt proceedings now before this court for review. The bonds were fixed by Judges Townsend and Lacombe 51
after full argument as to the amount sufficient to indemnify respondents during the respective stays of the injunction. Judges Townsend and Lacombe were fully acquainted with the merits of the case and with all the facts thereof. Both Judge Townsend and Judge Lacombe were in great doubt, as appears from their opinions (T. No. 307, p. 327; T. No. 308, p. 74), and each of the learned judges stated in his opinion that there should be a stay pending appeal. In the Circuit Court of Appeals Judge Wallace, dissenting from the prevailing opinion written by Judge Hough, with whom Judge

52 Coxe concurred (T. No. 308, p. 94), stated that, in his opinion, claim 5, one of the two claims in suit, was invalid as covering merely the function of a machine, and (p. 95) that the "rule of infringement adopted by the majority opinion not only extends the monopoly of the patent owner to an unprecedented extent, but is subversive of the right of a purchaser of the patented thing to realize its fair measure of usefulness by making necessary reparations or changes by way of improvement."

The injunction originally granted by Judge Townsend and stayed pending appeal (T. No. 307, p. 330) was based upon the sale of a single machine
53 which the Leeds & Catlin Company had taken from a manufacturer in part settlement of an account. The Leeds & Catlin Company had never manufactured an infringing machine. Judge Townsend carefully considered the question of requiring any security as a condition of the stay pending appeal from the decree for injunction. He was thoroughly familiar with the facts, and affidavits were presented to him with reference to the amount of the bond, if any, to be required. Upon consideration, Judge Townsend in May fixed the amount of the bond at $10,000, which was filed. Thereafter, it appearing that the appeal could not be argued in the Circuit Court of Appeals until the following
54 October Term, counsel for respondents moved before Judge Townsend for an order increasing the bond, and Judge Townsend, being aware of the fact that the Leeds & Catlin Company was not engaged in the manufacture or sale of machines embodying the invention of the patent in suit, but merely in the manufacture and sale of unpatented sound records, at once denied the motion by an order signed June 8, 1906, a copy of which is hereto annexed.

When Judge Lacombe held on the contempt motion that the selling of the unpatented sound record for use in replacing the sound record forming

an element of claim 35 of the patent in suit was an 55
infringement, he stated, upon the settlement of the
order, that seven judges out of ten would have de-
nied the motion of the respondents and would have
obliged the respondents to litigate the question,
which had never previously been decided, by a new
suit. Judge Lacombe also stated that in view of
the authorities the question was one of great doubt
and not only did he state in his opinion that the
collection of the fine should be stayed pending ap-
peal, but upon motion of deponent, as counsel for
the Leeds & Catlin Company, Judge Lacombe at
once granted an order suspending the decree for
injunction in so far as it had been interpreted by 56
him to restrain the Leeds & Catlin Company from
selling records for use upon machines of the patent
in suit which had been sold, combined with rec-
ords, by the respondents or their licensees. De-
ponent, as counsel for the Leeds & Catlin Com-
pany, offered to file a bond as a condition of the
suspension of the injunction, and Judge Lacombe
held that a bond in the sum of $10,000 would be
sufficient security to the respondents pending ap-
peal. The order thus partially staying the injunc-
tion (T. No. 308, p. 77) was drawn so as to cover
the period of appeal both to the Circuit Court of
Appeals and to the Supreme Court of the United
States, should the Supreme Court be of opinion 57
that the decision of the Circuit Court of Appeals
should be reviewed by writ of certiorari. For this
reason no limitation of the appeal as an appeal to
the Circuit Court of Appeals was inserted in the
order, the intention of deponent at the time of the
drawing of the order being to bring the question
before the Supreme Court of the United States in
the event of an unfavorable decision by the Circuit
Court of Appeals. There has been no change in
the circumstances of the case and no change in the
sufficiency of the surety since Judge Lacombe, in

58 the exercise of his discretion, fixed the bond at $10,000.

In the Circuit Court of Appeals the same doubt existed upon the question of law that existed in the mind of Judge Lacombe in the Circuit Court. Judge Wallace dissented, as above stated. Judge Coxe stated that the question was one much discussed, and Judge Hough, who wrote the prevailing opinion, stated to deponent in conversation that, in his opinion, there was a probability that the Supreme Court would reverse the decision of the Circuit Court of Appeals under the decision of the Supreme Court in the *Morgan Envelope Company* case (152 U. S., 425), affirming Judge Wal-
59 lace's opinion (40 Fed., 577), but that he, Judge Hough, had felt obliged to follow certain later decisions of the Circuit Court of Appeals which seemed to limit the decision of the Supreme Court in the Morgan Envelope Company case. Such being the attitude of the Judges who decided the case in Circuit Court and in the Circuit Court of Appeals, Judges Hough and Coxe at once granted deponent's motion, as counsel for the Leeds & Catlin Company, to have the order of affirmance entered before the expiration of the usual ten days and also granting deponent's motion for a stay of the mandate until the Supreme Court should pass
60 upon deponent's application for the two writs of certiorari. Copies of the affidavit and memorandum submitted by deponent to the Circuit Court of Appeals upon said motion for a stay of the mandate and of the order granting the stay of the mandate are hereto annexed. It was set forth that a bond of $10,000 had been filed in the Circuit Court as a condition of the stay and that such bond was ample security. Mr. Pettit, counsel for the respondents, opposed deponent's effort to secure the entry of an order of affirmance in time to enable him to make the application for writ of certiorari

before the adjournment of the Supreme Court and opposed deponent's motion for a stay of the mandate, but in such opposition he was unsuccessful, and the two petitions for writs of certiorari being presented to this Honorable Court on May 13, 1907, with extraordinary diligence, were both granted on May 27, 1907. 61

It thus appears that the question of the sufficiency of a bond to secure respondents for the sale by the Leeds & Catlin Company of the unpatented records was considered and passed upon by Judge Townsend and then by Judge Lacombe, and was before the Circuit Court of Appeals, and no circumstance has arisen since the action of the learned Judges of the courts below to change the circumstances of the case, it being apparent that when the amount of the security was fixed in the Circuit Court it was intended to cover the entire period of the appeal, which period related entirely to the future. 62

I have read the annexed affidavits of Edward F. Leeds, president of the Leeds & Catlin Company, and of Charles T. Fowler, bookkeeper and accountant thereof, and I believe the statements made by them in their said affidavits to be true. I have read the allegations of the petition and affidavits in support thereof upon this motion and to my knowledge, as fully shown by Mr. Leeds, the said allegations are false and misleading. The Leeds & Catlin Company has sustained a heavy loss by reason of the injunction and during the period of the stay thereof, and respondents make no showing whatever that they have suffered any damages by reason of the partial stay of the injunction, and from my knowledge of the facts I believe that respondents have not and could not have suffered any damage whatever from the partial stay of the in- 63

64 junction, pending the decision of this Court under the two writs of certiorari.

LOUIS HICKS.

Subscribed and sworn to before me this 20th day of February, 1908.

FRANK Z. DEMAREST,
[NOTARY'S SEAL.] Notary Public,
New York County, N. Y.

IN THE
CIRCUIT COURT OF THE UNITED STATES,
65 SOUTHERN DISTRICT OF NEW YORK.
In Equity, No. 8797.

VICTOR TALKING MACHINE COMPANY *et al.*,
Complainants,

vs.

LEEDS & CATLIN COMPANY,
Defendant.

66 Ordered, this eighth day of June, 1906, that the motion for increase of bonds over and above the amount fixed by the order of this Court of May 2, 1906, is hereby denied.

WM. K. TOWNSEND,
United States Circuit Judge.

Aproved as to form.

LOUIS HICKS,
Solicitor for Defendant.

May 31, 1906.

HORACE PETTIT,
Counsel for Complainants.

Filed June 11, 1906.

At a Stated Term of the United States Circuit Court of Appeals, in and for the Second Circuit, held at the Court Rooms in the Post Office Building in the City of New York on the 8th day of May, one thousand nine hundred and seven. 67

Present—Hon. WILLIAM J. WALLACE,
Hon. ALFRED C. COXE,
Circuit Judges.
Hon. CHARLES M. HOUGH,
District Judge.

68

LEEDS & CATLIN COMPANY,
Plaintiff-in-Error,

AGAINST

VICTOR TALKING MACHINE COMPANY and UNITED STATES GRAMOPHONE COMPANY,
Defendants-in-Error.

Order staying Mandate.

It appearing from the annexed affidavit of Louis Hicks, counsel for plaintiff-in-error, that plaintiff-in-error has served notice of the presentation to the Supreme Court of the United States of a petition for writ of certiorari to review the judgment finding the plaintiff-in-error in contempt, which judgment has been affirmed by this court; now, on motion of Louis Hicks, counsel for plaintiff-in-error, it is 69

Ordered that the issue of the mandate under said order of affirmance be, and the same hereby is, stayed until May 29, 1907.

A. C. C.

70 UNITED STATES CIRCUIT COURT OF APPEALS,

FOR THE SECOND CIRCUIT.

LEEDS & CATLIN COMPANY,
Plaintiff-in-Error,

vs.

VICTOR TALKING MACHINE COMPANY and UNITED STATES GRAMOPHONE COMPANY,
71 Defendants-in-Error.

State and County of New York, ss.:

LOUIS HICKS, being duly sworn, says: He is solicitor and counsel for plaintiff-in-error. By a divided court the judgment of the Circuit Court finding plaintiff-in-error in contempt of the preliminary injunction in this suit has been affirmed by this court. Plaintiff-in-error has served upon solicitors for defendants-in-error notices of applications to be made to the Supreme Court of the United States on May 13, 1907, for writs of certiorari to review the judgment finding the plaintiff-in-error in con-
72 tempt, as well as the decree for preliminary injunction. Deponent has been informed by the clerk of the Supreme Court of the United States that if a petition for writ of certiorari be presented on May 13, 1907, a decision upon the application for the writ will be rendered on May 27, 1907, and that the Supreme Court will adjourn on May 27, 1907, until the fall and will not sit between May 13, 1907, and May 27, 1907. Should the application for writ of certiorari to review the judgment finding plaintiff-in-error in contempt be denied, then, of course, execution should issue to collect the pen-

alty imposed and the stay of the preliminary in- 73
junction made by the Circuit Court so as to permit plaintiff-in-error to sell sound records for use in the United States upon the machines sold by defendants-in-error and the licensees should be vacated; but, should the Supreme Court be of the opinion that the decision of this court affirming the judgment finding defendant in contempt should be certified to the Supreme Court for review by the Supreme Court, in such case the ends of justice require that the mandate of this court do not issue until the decision of the Supreme Court, and that the stays mentioned continue until the Supreme Court has rendered its decision. Should the Su- 74
preme Court grant the writ of certiorari, and reverse the decision of this court, plaintiff-in-error would be entirely without remedy if the fine had been collected and plaintiff-in-error had been prevented in the meantime from making and selling its disc sound-records. Ample security pending the stay, in the sum of $10,000, has been filed by plaintiff-in-error. Wherefore, deponent, on behalf of plaintiff-in-error, requests the entry of the annexed order.

LOUIS HICKS.

Subscribed and sworn to before me
this 6th day of May, 1907.
FRANK Z. DEMAREST, 75
Notary Public,
[NOTARY'S SEAL] New York Co.

76

UNITED STATES CIRCUIT COURT OF APPEALS,

SECOND CIRCUIT.

LEEDS & CATLIN COMPANY,
Plaintiff in Error,

vs.

VICTOR TALKING MACHINE COMPANY and UNITED STATES GRAMOPHONE COM-
77 PANY,
Defendants in Error.

MEMORANDUM ON BEHALF OF PLAINTIFF IN ERROR ON SETTLEMENT OF ORDERS.

May 13, 1907, is the last day on which a petition for writ of certiorari can be presented to the Supreme Court of the United States and a decision had on May 27, 1907, when the Supreme Court adjourns until next fall. The Supreme Court will not sit between May 13 and May 27. It is, therefore, of the utmost importance to plaintiff in error
78 that its petition for writ of certiorari be presented on May 13. With that end in view, counsel for plaintiff in error has already served upon counsel for defendants in error a copy of the petition for writ of certiorari and notice of making the application on May 13. The petition is only six pages long and has as an exhibit, a copy of the brief for plaintiff in error in the Circuit Court of Appeals. Immediately upon the affirmance, by this Court, of the order finding plaintiff in error in contempt, request was made to Mr. Pettit, counsel for defendants in error, to sign a stipulation that the order of affirmance be entered at once and all

the papers required to be served on the application 79
for writ of certiorari were served a week before May 13. In view of Judge Wallace's dissenting opinion and of the great importance of the question of law involved and of the fatal consequence to plaintiff in error, it would manifestly be unjust not to permit the entry of the order of affirmance so as to enable plaintiff in error to file with the Clerk of the Supreme Court, in accordance with the rules, all papers necessary to be filed on May 11.

In addition to the order of affirmance, plaintiff in error requests the entry of an order staying the issue of the mandate under the order of affirmance 80
until the decision of the Supreme Court either denying the application for the writ of certiorari, or, if the application be allowed, determining the questions of law brought up under the writ for its decision and determination. A bond having been filed to secure payment by plaintiff in error to defendants in error of the penalty of $1,000 imposed by the Judge of the Circuit Court finding plaintiff in error in contempt, collection of the fine should be stayed until the determination of the Supreme Court, and if the mandate issues before such determination, proceedings to collect the fine would, of course, be instituted in accordance with 81
the mandate.

Moreover, Judge Lacombe, believing the question of law to be one of considerable doubt, and it seems to be in view of Judge Wallace's dissenting opinion, stayed the preliminary injunction pending appeal in so far as it had been construed by him to enjoin plaintiff in error from selling disc sound-records for use on machines sold by the Victor Company and its licensees. Plaintiff in error has filed a bond in a large sum ($10,000) to indemnify defendants in error against damages accruing during the stay. Should the Supreme

82 Court be of opinion that the decision of this Court should be brought to it by writ of certiorari for review, it is manifest that the stay of the injunction, to the extent granted by Judge Lacombe, should continue until the determination of the question of law by the Supreme Court. Any other course would mean irreparable loss to plaintiff in error and immediate and utter destruction to its record making business. It is, therefore, respectfully submitted that the mandate should not issue for this second reason until the denial of the application for writ of certiorari by the Supreme Court, or, if the application be granted, until the
83 decision by the Supreme Court of the question of law involved. Upon the filing of the mandate and the entry of the order thereon in the Circuit Court, the stay becomes vacated and the collection of the fine is in order. Defendants in error are amply secured by a heavy bond and can suffer no possible injury. It may be argued that the application can be made to the Circuit Court, but the power of the Circuit Court is open to question and the whole matter being before this Court, it is but reasonable and proper that this Appellate Court should, by staying the mandate, indicate and order that until the determination of the difficult question of law involved by the Supreme Court, the present equit-
84 able condition shall continue, lest, in the event of a decision by the Supreme Court favorable to plaintiff in error, irreparable injury may have been done to plaintiff in error through the issue of the mandate, the collection of the fine and the vacation of the stay.

Dated New York, May 8, 1907.

Respectfully submitted,

LOUIS HICKS,
Counsel for Plaintiff in Error.

[28301]

A patent may embrace more than one invention, *Steinmetz* v. *Allen*, 192 U. S. 543, and it may embrace a process and the apparatus by which it is performed.

Where dependent and related inventions are patented separately a foreign patent for either does not affect the other under § 4887, Rev. Stat., and the same rule applies if such inventions are embraced in one patent.

While a combination is a union of elements which may be partly new, or wholly old or wholly new, the combination is a means distinct from its constituent elements, any of which, if new and patentable, may be covered by separate claims in the same patent as the combination.

Separate claims in the same patent are independent inventions, and the infringement of one is not the infringement of the others, and the redress of the patentee is limited by the injury he suffers; nor is the validity and duration of valid claims affected by the invalidity or expiration of any other claim. *Siemens* v. *Sellers*, 123 U. S. 276, distinguished.

In this case *held* that the foreign patent granted to Berliner for talking machines was not identical with certain claims included in his United States patent in suit and therefore his patent as to those claims did not expire with the foreign patent under § 4887, Rev. Stat.

A patent of the United States for an invention extends under § 4887, Rev. Stat., for the duration of the definite term for which a foreign patent may have been granted for the same invention, and does not expire by the forfeiture of such foreign patent or through the operation of a condition subsequent according to the foreign patent, such as the payment of fees during the life of the patent.

146 Fed. Rep. 534; 148 Fed. Rep. 1022, affirmed.

THIS case is here on certiorari to an interlocutory decree of injunction restraining the petitioner, Leeds & Catlin Company from manufacturing, using or selling sound reproducing apparatus or devices embodied in claim No. 35 of letters patent No. 534,543, issued to Emil Berliner, bearing date nineteenth of February, 1895, and also from manufacturing, using or selling or in any way disposing of apparatus or devices which embody the method specified in claim No. 5 of the same patent. These claims will be given hereafter.

The bill is in the usual form and alleges the issuing of the patent and the existence of the necessary conditions thereof

under the laws of the United States. It also alleges the transfer of title to the plaintiffs in the suit and the infringement of claims 5, 32 and 35 by the defendant, petitioner herein.

Petitioner answered, denying some of the allegations of the bill, and of others denying that it had knowledge or information sufficient to form a belief. Explicitly denied infringement, and alleged anticipation of the invention described in the patent by a great number of patents and publications in this country and other countries, an enumeration of which was made. And hence it is alleged that, in view of the state of the art, Berliner was not the first inventor or discoverer of any material or substantial part of the alleged improvement and invention described or claimed.

The answer further alleged that said letters patent did not describe or specify or claim any subject-matter patentable under the statutes of the United States, and are and always have been null and void. Abandonment is alleged and a two-years' use of the invention in this country before the application for the patent, that the invention and improvement were known and used by others and were in public use and on sale in this country by divers persons, a list of whose names is given.

It is alleged that before the invention was patented in the United States the same was patented, or caused to be patented, by Emil Berliner in foreign countries, and that by reason whereof, under § 4887 of the Revised Statutes of the United States, the letters patent in suit were limited to expire at the same time with said foreign patents and each of them. The numbers and dates of the foreign patents are given—two in Great Britain, three in France, three in Germany and one in Canada. They will be specifically referred to hereafter. And it is alleged that in consequence thereof the said letters patent of the United States have long since expired and plaintiff is not entitled to any relief by injunction or other relief in equity, that a court of equity has no jurisdiction of the suit, and that plaintiff has an adequate remedy at law. A replication was filed to the answer.

Upon the bill and certain supporting affidavits an order to show cause against a preliminary injunction was issued, which coming on to be heard upon such affidavits, and other affidavits and exhibits, a preliminary injunction was granted. 146 Fed. Rep. 534. It was affirmed by the Circuit Court of Appeals. 148 Fed. Rep. 1022.

Mr. Louis Hicks for petitioner:

Claims 5 and 35 of the patent in suit are void because they are claims for the functions of a machine. See dissenting opinion of Wallace, J., case below, 154 Fed. Rep. 61; *Westinghouse* v. *Boyden Co.*, 170 U. S. 537, 554; *Corning* v. *Burden*, 15 How. 252; *The Telephone Cases*, 126 U. S. 1, 531; *Risdon Locomotive Works* v. *Medart*, 158 U. S. 68, 78; *Hatch* v. *Moffitt*, 15 Fed. Rep. 252; *Cleveland Co.* v. *Detroit Co.*, 131 Fed. Rep. 740, 742; *Gage* v. *Kellogg*, 23 Fed. Rep. 891, 894; *Manhattan Co.* v. *Helios Co.*, 135 Fed. Rep. 785; *Tyden* v. *Ohio Co.*, 152 Fed. Rep. 183; *American Co.* v. *Steward*, 155 Fed. Rep. 731, 738; *American Co.* v. *Denning*, 160 Fed. Rep. 108.

Claims which describe the operation and effect of a machine have, without exception, been held invalid. *Busch* v. *Jones*, 184 U. S. 598, 607; *Risdon Locomotive Works* v. *Medart*, 158 U. S. 68, citing and approving *Mackay* v. *Jackman*, 12 Fed. Rep. 615; *Brainard* v. *Cramme*, 12 Fed. Rep. 621; *Gage* v. *Kellogg*, 23 Fed. Rep. 891; *Hatch* v. *Moffitt*, 15 Fed. Rep. 252; *Sickles* v. *Falls Co.*, 4 Blatch. 508; *Excelsior Co.* v. *Union Co.*, 32 Fed. Rep. 221; *Coupe* v. *Weatherhead*, 16 Fed. Rep. 673; aff'd 147 U. S. 322; *Stokes Co.* v. *Heller*, 96 Fed. Rep. 104; *Dodge Mfg. Co.* v. *Ohio Works*, 101 Fed. Rep. 584; *Dodge Mfg. Co.* v. *Collins*, 106 Fed. Rep. 935, 937; *Cleveland Co.* v. *Detroit Co.*, 131 Fed. Rep. 740, 742; *Travers* v. *Hammock Co.*, 78 Fed. Rep. 638; *Wells Glass Co.* v. *Henderson*, 67 Fed. Rep. 930, 935; *American Co.* v. *Elkhart Co.*, 84 Fed. Rep. 960; *Ginsdorff* v. *Deering*, 81 Fed. Rep. 952; *Dick Co.* v. *Henry*, 160 Fed. Rep. 690, 692.

Claim 35 of the patent in suit is void because it is indefinite

and meaningless and claims nothing. See *Merrill* v. *Yeomans*, 94 U. S. 568, 573; *Keystone Bridge Co.* v. *Phœnix Iron Co.*, 95 U. S. 274, 278; *Hardison* v. *Brinkman*, 156 Fed. Rep. 962, 967; *Cincinnati Co.* v. *American Co.*, 143 Fed. Rep. 322, 325.

Claims 5 and 35 of the patent in suit are void because anticipated by British patent No. 1644 of 1878 to Edison, and for lack of invention in view of the prior art. This defense is good and valid and should have been considered and decided on its merits by the courts below under the rule stated by this court in *Mast, Foos & Co.* v. *Stover Mfg. Co.*, 177 U. S. 485. See under this head: *McClain* v. *Ortmayer*, 141 U. S. 419, affirming 33 Fed. Rep. 284.

Claims 5 and 35 of the patent in suit are void because anticipated by United States patent No. 341,214 of May 4, 1886, to Bell and Tainter, or by British patent No. 6027 of May 4, 1886, to Johnson for the same Bell and Tainter invention, and for lack of invention in view of the prior art.

Claims 5 and 35 of the patent in suit are void because anticipated by Werner Suess, and for lack of invention in view of the prior art.

This defense rests upon the three following documents:

1. United States patent No. 427,279, of May 6, 1890, to Suess, assignor to Berliner.

2. Canadian patent No. 41,901 of February 11, 1893, applied for May 5, 1891, to Berliner, as assignee of Suess.

3. Berliner's lecture before the Franklin Institute of May 16, 1888, acknowledging Suess to be the inventor.

Berliner patent in suit No. 534,543, of February 19, 1895, was granted for an invention previously patented by Berliner in Germany, by Berliner German patent No. 53,622, of November 20, 1889. The term of the patent in suit, therefore, expired with the expiration of the term of the prior German patent on November 7, 1902, before this suit was begun. Revised Statutes, § 4887; *Bate Refrig. Co.* v. *Sulzberger*, 157 U. S. 1; *Société* v. *Electric Co.*, 97 Fed. Rep. 604, 605; *Siemens' Admr.* v. *Sellers*, 123 U. S. 276.

LEEDS AND CATLIN COMPANY *v.* VICTOR TALKING MACHINE COMPANY.

CERTIORARI TO THE CIRCUIT COURT OF APPEALS FOR THE SECOND CIRCUIT.

No. 80. Argued January 15, 18, 1909.—Decided April 19, 1909.

Where grave questions of fact are presented by the proof on which a preliminary injunction has been granted in a patent case, this court will not go beyond the action of the lower court and decide those questions and the case on the merits.

A combination which produces by the coöperation of its constituents the result specified in the manner specified is a true mechanical device and a valid combination.

Revised Statutes, § 4887, fixing the single term of a home "patent granted for an invention" previously patented in a foreign country, is clear and unambiguous and must control the decision in this suit without change by judicial action "based upon some supposed policy of Congress." A patent cannot have a plurality of terms and expire in parcels. *Siemens* v. *Sellers*, 123 U. S. 276. And see also *Hadden* v. *Collector*, 5 Wall. 107, 111; *Scott* v. *Reid*, 10 Pet. 524, 527; *Karst* v. *Gane*, 136 N. Y. 316, 321; *People* v. *Woodruff*, 132 N. Y. 355, 364; *South Bay Co.* v. *Howey*, 190 N. Y. 240, 247.

Broadening or narrowing the claims of an American patent will not prevent the operation of the statute. 5 Federal Statutes Annotated, 470, and cases there cited.

The test of the question whether an American patent is granted for an invention previously patented in a foreign country, is whether an article made according to the description of the invention patented by the foreign patent would infringe the American patent, that is, any claim of the American patent. *Commercial Manufacturing Co.* v. *Fairbank Co.*, 135 U. S. 176.

In determining whether a home patent is granted for an invention previously patented in a foreign country, the precise question is whether any of the claims of the home patent include the invention or some substantive part of the invention shown by the prior foreign patent. If so, the home patent expires as to all its claims with the foreign patent since a "patent cannot expire in parcels." *Western Electric Co.* v. *Citizen's Tel. Co.*, 106 Fed. Rep. 215; *Thomson-Houston Co.* v. *McLean*, 153 Fed. Rep. 883. See *Electrical Accumulator Co.* v. *Brush Electric Co.*, 52 Fed. Rep. 130.

A patent cannot expire in part and survive in part. A generic claim, covering the specific form of a specific claim and other forms as well, must, under any construction of the statute, expire with the expiration of the specific claim. *Sawyer Spindle Co.* v. *Carpenter*, 133 Fed. Rep. 238; aff'd 143 Fed. Rep. 976; *Aquarama Co.* v. *Old Mill Co.*, 124 Fed. Rep. 229, and *Westinghouse Co.* v. *Stanley Co.*, 138 Fed. Rep. 123, distinguished.

Berliner patent in suit No. 534,543 of February 19, 1895, was granted for inventions previously patented by Berliner in France, by his French patent No. 207,090 of July 19, 1890. The term of the patent in suit, therefore, expired with the expiration of the term of the prior French patent on July 19, 1905, before the decree for injunction was entered.

The patent in suit and claims 5 and 35 thereof expired, before this suit was begun, with the expiration of the prior British, French and German patents of November 8, 1887, to Berliner for the so-called "Basic Invention" covered by said claims 5 and 35.

Berliner patent in suit No. 534,543 of February 19, 1895, expired February 11, 1899, before this suit was begun, with the expiration of the term of six years for which the prior Berliner-Suess Canadian patent No. 41,901, of February 11, 1893, was granted, and beyond which it was not prolonged. *Commercial Mfg. Co.* v. *Fairbank*, 135 U. S. 176. See also: *Bate* v. *Hammond*, 129 U. S. 151; *Gramme Electric Co.* v. *Arnoux*, 17 Fed. Rep. 838, 840.

Judge Townsend found that the Berliner-Suess Canadian patent "discloses and broadly claims the invention covered by the claims here in suit," and "that if this patent expired, as claimed in 1899, the patent in suit expired at the same time."

Assuming, as Judge Townsend found, that the Berliner-Suess Canadian patent "discloses and broadly claims the invention covered by the claims here in suit," the patent in suit expired on February 11, 1899, with the expiration of the six year term for which the Canadian patent was granted.

The invention of the Berliner-Suess Canadian patent was, under the statute and decided cases, patented and caused to be patented by Berliner, the patentee of the patent in suit.

Under the patent act of Canada, a Canadian patent "expires," within the meaning of § 4887 of the Revised Statutes, at the expiration of the term for which the fee to the Government has been paid, unless a further fee for a "further term" is paid.

The patent does not lapse and is not forfeited, but its term expires. The Berliner-Suess Canadian patent was granted for a term of six, and not of eighteen, years, since the granted term depends solely upon the provisions of the patent act.

Under the provisions of the patent act of Canada payment of a further fee for the prolongation of the patent for a further term is a condition precedent to the existence of a term beyond the original term of six years, and not a condition subsequent operating on non-performance to forfeit the unexpired portion of a term previously granted. See *Pohl* v. *Anchor Brewing Co.*, 134 U. S. 381, 386; *Davis* v. *Gray*, 16 Wall. 229; *Giddings* v. *Ins. Co.*, 102 U. S. 111.

Mr. Horace Pettit for respondents:

The validity of claims 5 and 35 have been sustained in all cases where these claims have been brought into question. *Victor Talking Machine Co.* v. *American Graphophone Co.*, 140 Fed. Rep. 860; same case on appeal, 145 Fed. Rep. 350; *Victor Talking Machine Co.* v. *Hoschke et al.*, 158 Fed. Rep. 309; *Victor Talking Machine Co.* v. *The Fair*, 118 Fed. Rep. 609; *S. C.*, 123 Fed. Rep. 424; also *Victor Talking Machine Co.* v. *Shaffer & Salm*, and *Victor Talking Machine Co.* v. *Douglas Phonograph Co.*, not yet reported.

Siemens v. *Sellers*, 123 U. S. 276, does not sustain petitioner's proposition that if a minor feature of the United States patent happens to be patented abroad before the United States patent separately and independently of the main feature of the United States patent, that the expiration of that patent forfeits the entire United States patent. Such a proposition is absolutely contrary to the intent of § 4887. See *Westinghouse* v. *Stanley Improvement Co.*, 138 Fed. Rep. 623. Under the decision in *Siemens* v. *Sellers*, the foreign patent, in order to come within the statute, § 4887, must contain the principal invention of the United States patent sought to be curtailed thereby. See also *United Nickle Co.* v. *California Electrical Works*, 25 Fed. Rep. 475, 479; *Gage* v. *Herring*, 107 U. S. 640, 646; *Leggett* v. *Standard*

Oil Co., 149 U. S. 287, 293; *Carlton* v. *Bokee*, 17 Wall. 463, 472; *Russell* v. *Place*, 94 U. S. 606, 609; *Celluloid Mfg. Co.* v. *Zylonite Brush & Comb Co.*, 27 Fed. Rep. 291, 294.

In all the authorities, however, which have been considered where it was held that the prior foreign patent limited the domestic patent, the substantial invention of the United States patent had been patented in the prior foreign patent, or the invention of the foreign patent has been so nearly like the substantial invention of the United States patent as to render them practically one and the same.

Where they have not been substantially one and the same, the defense has failed. *Aquarama Co.* v. *Old Mill Co.*, 124 Fed. Rep. 333; *Welsbach Light Co.* v. *Rex Incandescent Co.*, 94 Fed. Rep. 1006; *Electric Accumulator Co.* v. *Brush Electric Co.*, 52 Fed. Rep. 130. See also *Westinghouse Electric Co.* v. *Stanley Instrument Co.*, 138 Fed. Rep. 823.

Is the principal invention of the domestic patent found in the foreign patent? Is the subject-matter of one the same in all essential particulars as that of the other? These were the main tests applied in *Siemens* v. *Sellers*, 123 U. S. 276. See also *Accumulator Co.* v. *Julien Electric Co.*, 57 Fed. Rep. 605.

If the principal invention of the subsequent United States patent is not described or claimed in the prior foreign patent, the principal invention cannot forfeit. *Westinghouse Electric Co.* v. *Stanley Instrument Co.*, 138 Fed. Rep. 823.

In construing § 4887 the period of the prior foreign patent to be taken into consideration with the domestic patent, is the longest possible term of the foreign patent; is the period of duration expressed in the grant; or in other words, the duration of the United States patent is fixed when the United States patent issues, by the longest possible term of the foreign patent, and shall not be subject to be terminated by the occurrence or non-occurrence of certain facts which would require extraneous proof. *Diamond Match Co.* v. *Adirondack Match Co.*, 65 Fed. Rep. 803; *Pohl* v. *Anchor Brewing Co.*, 134 U. S. 381; *Holmes Electric Protective Co.* v. *Metropolitan Burglar Alarm*

Co., 21 Fed. Rep. 458; *Consolidated Roller Mill Co.* v. *Walker*, 43 Fed. Rep. 575.

MR. JUSTICE MCKENNA, after making the foregoing statement, delivered the opinion of the court.

The motion for preliminary injunction was made upon affidavits. Those of respondent (complainant in the Circuit Court) described the invention and the machine made in accordance therewith, averred the practical identity of petitioner's machine therewith, and set forth the record in the case of *The Victor Machine Co. and The United States Gramophone Co.* v. *The American Graphophone Co.*, instituted in the Circuit Court for the Southern District of New York. The affidavits averred that the suit was pending and awaiting decision when this suit was brought, and was subsequently decided; that by the decision, claims 5 and 35 of the patent in suit were held valid and infringed by the talking machine of the defendants, and that an injunction was ordered. 140 Fed. Rep. 800. And it was stated that the Circuit Court of Appeals, though not concurring with the Circuit Court in all of its reasoning, affirmed the decree.

The affidavits of petitioner (the defendant in the courts below) set forth the defenses which were made in the case just referred to, a summary of the proofs introduced to sustain the defense, and submitted new matter. The affidavits also contained a description of the patent in suit and what was considered to be its basic invention, averred its identity with certain foreign patents which were not in evidence in the other suit. The affidavits also undertook to meet and refute the charge of infringement. The affidavits were very long and circumstantial, and had attached to them copies of the foreign and domestic patents relied on, translations of foreign laws, copies of publications and certain testimony. Such parts of these exhibits as we deem relevant will be referred to hereafter.

Upon this body of proof, formidable even in its quantity, and having no other elucidation than the arguments of counsel and

some mechanical exhibits, presenting grave questions of fact, we are asked by petitioner to go beyond the action of the lower courts, and not only reverse them as to a preliminary injunction but decide the case. If we should yield to this invocation and attempt a final decision it would be difficult to say whether it would be more unjust to petitioner or to respondent.

The Circuit Court felt a like embarrassment, as will be observed from its opinion. The court did not pass on the defense of infringement, and said that, except as to one patent, the petitioner had failed to introduce any new matter which would have led the courts in the other case, if such matter had been before them, to have reached a different conclusion. And, speaking of the patents referred to, the Circuit Judge said: "But even if I am mistaken in this view, and if the expiration of the Suess Canadian patent is a complete defense, or if a decision of the questions raised as to the character and scope of the various patents now introduced for the first time should be postponed until final hearing, yet I am constrained to grant the injunction in order to permit an appeal and a determination of the questions at the earliest possible moment."

And the lower courts also reserved to the merits the consideration of the defense that claims 5 and 35 were invalid because they were the functions of machines, resting those defenses, so far as the preliminary injunction was concerned, upon the adjudication in the prior suit. We shall do the same, remarking, however, that the contention, if it has any strength as to claim 5, seems to us untenable as to claim 35. We think the latter is a valid combination, consisting of the elements, (1) a traveling tablet having a sound record formed thereon; (2) a reproducing stylus, shaped for engagement with the record, and free to be vibrated and propelled by it. It is, therefore, a true mechanical device, producing by the coöperation of its constituents the result specified and in the manner specified.

In passing on the other foreign patents the Circuit Court considered that the prior adjudications fortified the presumption of the validity of the patent in suit, and established its scope,

and that the new matter introduced by petitioner did not repel the presumption or limit the extent of the patent. That the lower courts properly regarded the prior adjudications as a ground of preliminary injunction is established by the cases cited in Walker on Patents, § 665 *et seq.* See also Robinson on Patents, § 117 *et seq.* And in that aspect the question must be considered, and so considering it we may pass the defenses of anticipation, whether complete or partial, and the defense of infringement. These are, we have already said, questions of fact which we are not inclined to pass upon unaided by the judgments of the lower courts made after a hearing on the merits.

The patent in suit and the patents which, it is contended, anticipate it or limit its extent or duration are for methods or devices whereby sound undulations trace or inscribe themselves upon a solid material, and are by suitable devices made to reproduce themselves and the sounds which made them. One of the questions in the case is, as we have seen, the relation of the patent in suit to the prior art. It is contended by the respondent that Berliner (he was the patentee of the patent in suit), improved the prior art, not only in the methods of recording and reproducing sounds, but in the devices by which the methods are accomplished.

In the old method the sound record was produced by vertical vibrations, either indenting a pliable material, by and in accordance with the sound waves along a helical or spiral line, as in the Edison patents, or by like vibrations engraving a suitable material, by and in accordance with the sound waves, as in the Bell and Tainter patent. By both of these methods there was produced a record consisting of a groove of varying depth, that is, containing elevations and depressions corresponding to the sound waves which produced them. In the Berliner patents the vibrations are made to inscribe a laterally undulating line in the general direction of a spiral. The line, therefore, is of even depth, the inequalities or sinuosities produced by the sound waves being upon its sides. By this method there is pro-

duced a sound record tablet, consisting of a fiat disc of hard resisting material, having in its surface inscribed a spiral groove of practically even depth, but undulating laterally in accordance with the sound waves. The patent in suit describes and specifies the ways of making such record tablet, as do the prior patents the sound records of the respective patentees. Further description of the records, however, is not necessary, as we shall have with them but incidental concern.

The records being made, the next step is the reproduction of the sounds which they record. This is done by adjusting to the line or groove inscribed upon the records a point or stylus attached to a diaphragm, which, being vibrated by the indentations or sinuosities of the groove, reproduces the sounds that made them. In the prior art the reproducing stylus and sound record were brought in operating relation to each other in two ways. The sound record was mechanically conveyed across the reproducing stylus, or the reproducer and its stylus were mechanically conveyed across the record. By one or the other of these means the stylus was kept in engagement with the record and accommodated to the shifting positions of its operative portions. In the patent in suit such independent means are dispensed with. The stylus is made to engage with the grooves in the record tablet, is vibrated laterally by its undulations, and guided or propelled at the same time with its diaphragm attachment across the face of the tablet, the successive portions of the groove reproducing the sound waves, which are transmitted to the air. The sound records are made of hard, indestructible material and, as stated in one of respondent's affidavits, the groove impressed therein "serves the twofold purpose of vibrating the stylus and producing the necessary vibrations in the diaphragm of the sound box, and also of automatically propelling the stylus in the groove across the surface of the record without a feed screw or other mechanism independent of the record itself." The method of doing that is the subject-matter of claim 5, and the means for performing the method is the subject-matter of claim 35. They are, respectively, as follows: "No. 5, the method

of reproducing sounds from a record of the same, which consists in vibrating a stylus and propelling the same along the record, substantially as described. No. 35 is a sound-producing apparatus, consisting of a traveling tablet having a sound record framed thereon and a reproducing stylus shaped for engagement with said record and free to be vibrated and propelled by the same, substantially as described."

We may now understandingly consider the new matter which was relied on in the courts below. The first in importance of these is that the patent in suit is for the same invention of certain foreign patents and expired with them. These patents consist of three French patents to Emil Berliner, respectively dated November 8, 1887, May 15, 1888, and July 19, 1890; German patents to Berliner dated November 8, 1887, May 16, 1888, and November 20, 1889; a Canadian patent of February 11, 1893, assigned by W. Suess to Berliner; English patents of November 8, 1887, and May 15, 1888. These patents are presented in an affidavit by the leading counsel for petitioner, accompanied by such comparisons of them with the patent in suit as established, it is contended, the identity of their inventions with its invention, and made applicable and controlling § 4887 of the Revised Statutes, which is as follows:

"SEC. 4887. No person shall be debarred from receiving a patent for his invention or discovery, nor shall any patent be declared invalid, by reason of its having been first patented or caused to be patented in a foreign country, unless the same has been introduced into public use in the United States for more than two years prior to the application. But every patent granted for an invention which has been previously patented in a foreign country shall be so limited as to expire at the same time with the foreign patent, or, if there be more than one, at the same time with the one having the shortest term, and in no case shall it be in force more than seventeen years."

The affidavits describe not only the reproducer of the patent in suit but also the recorder, and give details of the construction of both, and petitioner, in its briefs, elaborately traces

the development of Berliner's ideas in comparison with the prior art through three stages, each of which, it is contended "is represented by domestic and foreign patents, obtained or applied for, respectively, in 1887, 1888 and 1889–1892." Each stage, it is insisted, is claimed as an improvement upon the preceding stage, and all of them are but improvements upon the prior art. Berliner did not employ, it is said, any new principles in the reproduction of sound from a sound record, "the difference in the sound reproducing machines employed by him and those of the prior art consisting of modifications of details of construction." And it is further contended that an analysis of the patent in suit demonstrates "that the improvements described and claimed related first, to the recording of sound; and, second, to the reproducing of sound." It is impossible, counsel say, "to seriously contend that the essence of the improvements consist rather in the reproduction of sound than in the recording of sound." It is nevertheless argued that the lower courts so regarded the patent in suit, and by that error adjudged that the foreign patents did not embody Berliner's invention, and that, therefore, the patent in suit did not expire with them. Indeed, it is urged that "in the face" of the "expressed and positive declaration of the patentee as to what are the features of his invention, the courts below not only held that the patent included other features not enumerated by Berliner, but went even further, and held that the features which Berliner did enumerate as the features of his invention are not the principal features of his invention, but are mere minor details." This is a misapprehension of the view of the courts below. They confine themselves, as it was proper to do, to the claims in suit and to the invention exhibited in them, and in considering the relation of the patent in suit with foreign patents they distinguished between what the Circuit Court denominates the "broad and basic invention" covered by those claims and the "minor part" shown in the foreign patents. Petitioner attempts to make the recording and reproduction of sounds essential parts of one invention, of which the claims are

but parts. The purpose is to identify the invention of the patent with every one of the foreign patents and bring the case under what is conceived to be the doctrine of *Siemens* v. *Sellers*, 123 U. S. 276.

That case, it is contended, precludes a distinction between the claims of patent into basic and not basic, principal or subordinate, and establishes that all the claims of a home patent must be so limited as to expire with the expiration of a foreign patent, or if there be more than one prior foreign patent, with the expiration of the one having the shortest term. Upon the expiration of a patent, it is argued, all of its claims expire, since, as this court said in *Siemens* v. *Sellers*, as it is contended, "a patent cannot be considered as running partly to one date and partly to another, for this would be productive of endless confusion. In other words, a patent cannot expire in parcels, it cannot have a plurality of terms." Therefore it is contended that it is the patent, and not the separate claims thereof, which are by the statute limited to expire with the foreign patent. *Siemens* v. *Sellers* is cited for this doctrine, as we have said, and also the following cases: *Western Electric Co.* v. *Citizens' Telegraph Co.*, 106 Fed. Rep. 215; *Sawyer* v. *Spindle Co.*, 133 Fed. Rep. 238, affirmed in 143 Fed. Rep. 976; *Thomson & Houston Co.* v. *McLean*, 153 Fed. Rep. 883.

Siemens v. *Sellers* is especially relied upon, and whatever there is in the other cases that support the contention of petitioner is based on that case. In *Siemens* v. *Sellers* the patent passed upon was for an improved regenerator furnace, so called, and the question presented was whether it was identical with that described in an expired English patent. The court said (p. 283):

"We have carefully compared the two patents, the English and American, and can see no essential difference between them. They describe the same furnace in all essential particulars. The English specification is more detailed, and the drawings are more minute and full; but the same thing is described in both. There is only one claim in the English patent, it is true. But that claim, under the English patent system, entitled the

patentees to their entire invention, and is at least as broad and comprehensive as all four claims in the American patent."

It will be observed, therefore, that there was no distinction in the subject-matter of the claims. There was a difference in the number of the claims arising from the difference in the patent systems, but the claims were coextensive in substance and in invention. There was no question, therefore, of a difference in claims covering different inventions, but such contingency, it is contended, is embraced in the following passage (p. 283):

"It is contended by the counsel of the complainants that the American patent contains improvements which are not exhibited in the English patent. But if this were so, it would not help the complainants. The principal invention is in both; and if the American patent contains additional improvements, this fact cannot save the patent from the operation of the law which is invoked, if it is subject to that law at all. A patent cannot be exempt from the operation of the law by adding some new improvements to the invention; and cannot be construed as running partly from one date and partly from another. This would be productive of endless confusion."

This passage must be construed by what precedes it. It was said that there was no essential difference between the patents. "They described the same functions in all essential particulars," is the language used. "The principal invention," therefore, was "the same in both," and the improvements, which it was asserted the American patent contained, did not destroy its essence or its identity with the English patent, necessarily, therefore, did not save it "from the operation of the law." And the court meant no more than that. It was not said that a patentable improvement could not be made which could be secured by a patent which would endure beyond the expiration of a prior foreign patent for that which was improved. Such a ruling would contravene the right given by the statute. Section 4886 provides that "Any person who has invented or discovered any new and useful art, machine, manufacture, or composition of matter, or *any new and useful im-*

provement thereof . . . may obtain a patent therefor." The improvement would be the invention and would endure for the period given to it by law. Besides, a patent may embrace more than one invention. *Steinmetz* v. *Allen*, 192 U. S. 543. A process and an apparatus by which it is performed are distinct things. They may be found in one patent; they may be made the subject of different patents. So may other dependent and related inventions. If patented separately a foreign patent for either would not affect the other. Why would such effect follow if they are embraced in the same patent? What policy of the law would be subserved by it? The purpose of § 4887 of the Revised Statutes is very clear. It is that whenever an invention is made free to the public of a foreign country it shall be free in this. The statute has no other purpose. It is not intended to confound rights and to make one invention free because another is made so. This will even more distinctly appear in case of a patent for a combination, such as claim 35 is of the patent in suit.

A combination is a union of elements, which may be partly old and partly new, or wholly old or wholly new. But whether new or old, the combination is a means—an invention—distinct from them. They, if new, may be inventions and the proper subjects of patents, or they may be covered by claims in the same patent with the combination.

But whether put in the same patent with the combination or made the subjects of separate patents, they are not identical with the combination. To become that they must be united under the same coöperative law. Certainly, one element is not the combination nor in any proper sense can it be regarded as a substantive part of the invention represented by the combination, and it can make no difference whether the element was always free or becomes free by the expiration of a prior patent, foreign or domestic. In making a combination an inventor has the whole field of mechanics to draw from. This view is in accordance with the principles of the patent laws. It is in accordance with the policy of § 4887 of the Revised

Statutes, which is urged against it. That policy is, as we have seen, that an American patent is not precluded by a foreign patent for the same invention, but if a foreign patent be granted, an American patent is granted upon the condition that the "invention shall be free to the American people whenever, by reason of the expiration of the foreign patent, it becomes free to the people abroad." *Bate Refrigerating Co.* v. *Sulzberger*, 157 U. S. 1, 36. And all of the provisions of the statutes are accommodated. Each invention is given the full period of seventeen years, which the statute prescribes for it.[1] If limited at all, it can only be by a prior foreign patent identical with it. Nor can confusion result. Why should it? It does not result from analogous applications of the patent laws. Claims are independent inventions. One may be infringed, others not, and the redress of the patentee is limited to the injury he suffers, not by the abstract rights which have been granted him in other claims. One claim may be valid, all the rest invalid; invalid for the want of some essential patentable attribute. But what is good remains and is unaffected by its illegal associates. In such cases the patent does not stand or fall as a unity. If claims may be separable as in the case of infringement of some and not of others; if claims can be separable, though some are invalid, may they not be separable when some of them have expired? Certainly confusion cannot arise in one case more than in the other. Confusion might result in such circumstances as were presented in *Siemens* v. *Sellers*, where it was sought to extend the principal invention—indeed the only invention—by the date of a mere formal improvement of it. In such case, as

[1] Sec. 4884. Every patent shall contain a short title or description of the invention or discovery, correctly indicating its nature and design, and a grant to the patentee, his heirs or assigns, for the term of seventeen years, of the exclusive right to make, use, and vend the invention or discovery throughout the United States, and the Territories thereof, referring to the specification for the particulars thereof. A copy of the specification and drawings shall be annexed to the patent and be a part thereof.

it was said, the patent "cannot be construed as running partly from one date and partly from another."

In the light of these principles let us examine the foreign patents relied upon. Special stress is given to German patent No. 53,622 to Berliner, and it is contended that it expired before this suit was brought, and that the patent in suit expired with it. The patent refers to two others in which, it is said, there is described an apparatus for the recording of sound, and that "the present invention [that covered by the patent] relates to the instrument in the part of the apparatus performing the reproduction." The instrument is exhibited by a drawing and is specifically described. Petitioner says that that instrument covered the most important part of the Berliner gramophone, and that Berliner in his Franklin Institute lecture specifically stated that of the three principal features of the improvement of the patent in suit the *reproducer* formed one. But granting that he did say so, and that it is so, the inquiry yet remains, is it identical with the invention of claim 5 or claim 35 of the patent in suit? It is not of claim 5, for that is for a method, and a method is independent of the instruments employed to perform it. It is not of claim 35, for that claim is for a combination, and one element is not the combination. Indeed, all of the elements are not. To be that—to be identical with the invention of the combination—they must be united by the same operative law. Of course, an element is a part, an essential part of the combination, and enters as an operative agent in the performance of its functions. But this does not make it identical with the combination. It may be novel, patentable of itself, subject to its own special monopoly, or it may be free for everybody's use, but whether free or not free, free when the combination was formed (invented) or became free, it is not identical with the combination. It follows, therefore, that the expiration of the German patent No. 53,622 for the reproducer did not affect the duration of the patent in suit so far as claims 5 and 35 are concerned, even though such reproducer is made the subject of one of the claims of the patent in suit. To some

extent these remarks are applicable to all the foreign patents relied on by petitioner.

In the French patent No. 207,090, granted to Berliner, the claims cover a recorder as well as a reproducer of sound. They are practically the same instrument, and are denominated respectively in the patent as a recording sound box and as a reproducing sound box. As the first, to quote the patent, it is used to "trace acoustic curves upon the surface" of a sound record. As the second, that is as a reproducer, it reproduces the sounds which made the "acoustic curves."

It is contended by respondent that the recorder and reproducer of the patent in suit differ in certain details of construction and operation from the recorder and reproducer of the German and French patents, but the Circuit Court said that that question could only be determined by expert testimony, and assumed the details to be substantially identical. We shall do the same, and are of the opinion, for the reasons which we have given, that the expiration of those patents, the French patent as well as the German patent, did not carry with them the expiration of the inventions exhibited in claims 5 and 35 of the patent in suit.

It is further contended that the patent in suit expired with the British, French and German patents of November 8, 1887, to Berliner. These patents, it is contended, are for the "basic invention" covered by claims 5 and 35 of the patent in suit. The patents are identical, and therefore we consider only the British patent. The reasoning by which this is attempted to be supported is somewhat circuitous. Among the publications referred to in petitioner's answer and introduced in evidence was one in The Electrical World for November 12, 1887, one published in the same paper August 18, 1888, and a paper read by Berliner before the Franklin Institute May 16, 1888. In these publications there is description of the invention, and in the paper read before the Franklin Institute Berliner describes the genesis of his ideas and the ideas of others in the process of recording and reproducing sounds. He entered into a some-

what detailed description of his invention, exhibited a machine and gave an illustration of its powers, among others letting the audience "listen to some phonaulograms," which he said he had prepared within two weeks before in Washington. This was urged as a public use, but the Circuit Court decided that neither that lecture and exhibition nor the description in The Electrical World in 1887, constituted a public use within the meaning of the statutes. And the court also decided that the broad claims of the patent in suit were not made a part of the earlier application for patent No. 564,586, and that that omission, even when combined with such exhibition and publication, was not an abandonment and forfeiture of those claims. The Circuit Court of Appeals did not discuss those questions or express an opinion upon them, but decided that the specifications in the application for patent No. 564,586, issued subsequently to the patent in suit, were broad enough to warrant the making of the claims in controversy (5 and 35) and that the second application could fairly be considered a continuation of the first, and antedated the alleged public use. If this be so, petitioner contends, the two patents must be treated as one patent covering one invention, that described in No. 564,586, and, it is further contended, that as that invention was previously patented by the three foreign patents, the patent in suit expired with them. The reasoning is extremely technical, and we may adopt the answer made to it by the Circuit Court: "An examination of the drawings of the prior British patent shows that there is omitted therefrom Figure 10 of the United States patent No. 564,586, which was the only figure illustrating the form of the device covered by the claims here in suit. There is nothing either in the specifications or drawings of the said British patent which describes, illustrates or shows the methods or apparatus of the claims here in suit. These considerations apply equally to said earlier German and French patents."

It would be a very strange application of § 4887 to hold that it covers what is omitted from a foreign patent as well as what is included in such patent. At any rate, whatever was the rui-

ing in the prior suit, in the suit at bar the Circuit Court and the Circuit Court of Appeals both held that the inventions of claims 5 and 35 of the patent in suit were not exhibited in the British patent, and that is so far a question of fact, pertains so much to evidence rather than to a construction of the patents, that we may well remit it, as we have other questions of the kind, to the merits of the case.

There yet remains the Suess-Canadian patent to be considered. It was granted to Berliner as the assignee of Suess, and Judge Townsend, in the Circuit Court, said that the patent disclosed and broadly claimed the invention covered by the claims in suit, and on account of it defendant (petitioner here) contended that Berliner thereby admitted that Suess was the inventor of the reproducing apparatus of those claims; that in his application as the assignee of Suess he abandoned the broad claim in suit, and that as the patent covered the invention of the patent in suit and expired in 1899, the patent in suit expired with it. The learned judge further said:

"The evidence introduced in the original suit showed and the court found on the Suess patent 427,279 that Suess was merely an improver of a particular form of swinging arm device, and some of the language used in the specifications of this Suess-Canadian patent, which, however, was not before the court in the original suit, seems to indicate that its structure is merely an improvement on the broad Berliner invention, and Berliner himself afterwards applied for and obtained a Canadian patent for the broad invention covered by the claims here in suit."

The court, however, decided that the Canadian patent in terms described and claimed "the broad generic invention of Berliner covered by the claims here in suit," and to establish this quoted claims 5, 7, and 11 [1] of the Canadian patent and concluded that if that patent expired in 1899 the patent in suit also expired. The court, however, decided, expressing, how-

[1] 5. In an apparatus for reproducing sounds from a record tablet, the combination with a reproducer mechanism consisting of a sound-conveying tube and a diaphragm and stylus mounted at one end of the tube;

ever, some hesitation, that the patent did not then expire, stating the rule to be, as established by the cases, that a United States patent is limited by the term expressed in the foreign patent and that it is not affected by any lapse or forfeiture of any portion of the term by means of any condition subsequent.

The patent was granted for the term of eighteen years from its date, February 11, 1893, but provides as follows:

"The partial fee required for the term of six years having been paid to the Commissioner of Patents, this patent shall cease at the end of six years from date, unless at or before the expiration of the said term the holder thereof pay the fee required for the further term or terms as provided by law."

And it appears that the fee for the second term of six years was not paid, and that because of such non-payment the patent expired February 11, 1899. The contention of petitioner is, as has been seen, that the patent in suit expired at the same date by virtue of § 4887, Revised Statutes. The necessary effect of that section, it is contended by petitioner, being that if by any act of omission of the patentee the invention becomes free in a foreign country it becomes free in this country. The contention of the respondent is that the domestic patent endures for the longest possible term of the foreign patent. In other words, endures for the period expressed in the grant, and is not dependent upon or "subject to be terminated by the occurrence or non-concurrence by certain facts which would require extraneous proof." These opposing contentions are discussed at great length by counsel and a number of cases are cited.

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of a freely swinging supporting frame for the said producer mechanism, substantially as described.

7. In an apparatus for reproducing sounds from a record tablet, the combination with a reproducer mechanism consisting of a sound-conveyer, and a diaphragm and stylus mounted at one end thereof; of a supporting frame for the said reproducer, loosely pivoted to swing freely both laterally and vertically, substantially as described.

11. In an apparatus for reproducing sounds from a rotating record tablet, a reproducing stylus mounted to have a free movement over the surface of the record tablet, substantially as described.

We omit, however, the consideration of the cases and comment upon the arguments based upon them, as we think the questions involved are determined by *Pohl* v. *Anchor Brewing Co.*, 134 U. S. 381. It is there decided that "the statute manifestly assumes that the patent previously granted in a foreign country is one granted for a definite term; and its meaning is that the United States patent shall be so limited as to expire at the same time with such term of the foreign patent." And it is further said that the duration of the United States patent is not "limited by any lapsing or forfeiture of any portion of the term of such foreign patent by means of the operation of a condition subsequent, according to the foreign patent."

From these views it follows that there was no abuse of discretion in granting the preliminary injunction, and the decree is *Affirmed.*

LEEDS & CATLIN COMPANY *v.* VICTOR TALKING MACHINE COMPANY (NO. 2).

CERTIORARI TO THE CIRCUIT COURT OF APPEALS FOR THE SECOND CIRCUIT.

No. 81. Argued January 18, 1909.—Decided April 19, 1909.

Leeds & Catlin Co. v. *Victor Talking Machine Co.*, *ante*, p. 301, followed as to validity of Berliner patent for talking machines.

There is a distinction between the article which a combination machine deals with and the constituent elements composing the combination; and while it may not be infringement to supply the unpatented article dealt with by the combination, it is infringement to make and supply an unpatented element, necessary for the operation of the combination. *Morgan Envelope Co.* v. *Albany Paper Co.*, 152 U. S. 425, distinguished.

The combination itself, regardless of whether any or all of the elements be old or new, is the invention and, in law, is as much a unit as a single or non-composite instrument and one using or contributing to its use without permission infringes it.

Whether the elements of a combination patent are or are not patented is immaterial.

Where an element of a combination becomes unfit by deterioration there is a destruction of the combination and a renewal of that element amounts to reconstruction.

The right of substitution or resupply of elements of a combination extends only to repair and replacement made necessary by deterioration so as to preserve its fitness; license goes no further and does not extend to furnishing such elements to increase effectiveness or variety of the results of the combination.

Unpatented elements of a patented combination may not be sold for use therewith although they may legally be sold for use with other machines, and so *held* that it was infringement to sell record discs specially adapted therefor to the users of a patented talking machine although such discs were not patented and could lawfully be used in combination with other talking machines.

150 Fed. Rep. 147; 154 Fed. Rep. 58, affirmed.

THE facts are stated in the opinion.

Mr. Louis Hicks for petitioner:

The sound record is a temporary element of the combination forming the machine of the patent in suit and it is intended that the sound record shall frequently be replaced. The machine has no other use. It is well settled law that purchasers of such combinations from the patentee or his licensees have the right to replace such temporary parts, and that any manufacturer has the right to sell such parts to such purchasers for such purpose. The courts below, therefore, erred in holding that defendant violated the injunction by selling records with the intent that the same should be used in combination with the other elements of claim 35, in machines sold by complainants or their licensees combined with such records. *Morgan Envelope Co.* v. *Albany Paper Co.*, 40 Fed. Rep. 577; *S. C.*, 152 U. S. 425.

The Circuit Court of Appeals, following the decisions of this court, has held that the purchaser of a patented combination has the legal right immediately to substitute for an important or essential element of the combination one which he conceives

to be better suited to his purposes, even though such element was intended to be permanent; and that any one has an equal right to make and sell such elements to such purchaser for such purpose. *Thomson-Houston Electric Co.* v. *Kelsey Co.*, 75 Fed. Rep. 1005. See also *Chaffee* v. *Belting Co.*, 22 How. 217; *Wilson* v. *Simpson*, 9 How. 109; *Mitchell* v. *Hawley*, 16 Wall. 544, 548; *Adams* v. *Burke*, 17 Wall. 453, 456; *Edison Light Co.* v. *Peninsular Co.*, 101 Fed. Rep. 831, 835, 837.

No question of contributory infringement is here involved. Judge Shipman's decision in *Am. Graph. Co.* v. *Leeds*, 87 Fed. Rep. 873, cited by the Circuit Court, bears no analogy to the case at bar. Judge Grosscup's opinion in *Am. Graph. Co.* v. *Amet*, 74 Fed. Rep. 789, supports petitioner's contentions.

Complainants and their licensees having sold the combination of the patent to purchasers without restriction as to the records to be used to replace those purchased, it is well settled law that defendant has the right to sell records to such purchasers for use in replacing records purchased with machines from complainants and their licensees. *Heaton Co.* v. *Eureka Co.*, 77 Fed. Rep. 288; *Cortelyou* v. *Johnson*, 207 U. S. 196; *Keeler* v. *Folding Bed Co.*, 157 U. S. 659, 666; *Hobbie* v. *Jennison*, 149 U. S. 355; *Adams* v. *Burke*, 17 Wall. 453; *Bement* v. *Harrow Co.*, 186 U. S. 70; *Hartell* v. *Tilghman*, 99 U. S. 547; *Bobbs-Merrill Co.* v. *Strauss*, 210 U. S. 339.

Defendant's disc sound-records are unpatented articles of commerce of the prior art, which defendant could legally sell for use in the United States on mechanical feed-device machines, for export to foreign countries, concededly for repair of machines sold by complainants, and for other lawful purposes. There is no authority holding a party liable as an infringer solely because an article sold by him might be, or was, in fact, used by the purchaser as one element of a patented combination. The tendency of the later decisions is to do away with unwarrantable restrictions upon trade. *Bullock Co.* v. *Westinghouse Co.*, 129 Fed. Rep. 105, 111; *Cortelyou* v. *Johnson*, 145 Fed. Rep. 933; *Snyder* v. *Bunnell*, 29 Fed. Rep. 47, 48; *Standard*

Co. v. *Computing Co.*, 126 Fed. Rep. 639; *Canda* v. *Michigan Co.*, 124 Fed. Rep. 486.

Complainants and their licensees, by selling the sound reproducing apparatus of claim 35 of the patent in suit, impliedly licensed the purchaser thereof to combine a suitable record therewith, in every case where the apparatus was sold without a sound-record combined therewith, and for that purpose to purchase such a record from persons other than complainants or their licensees. *Morgan Envelope Co.* v. *Albany Paper Co.*, 152 U. S. 425, 432; *Heaton Co.* v. *Eureka Co.*, 77 Fed. Rep. 288, 300; *Edison El. Co.* v. *Peninsular Co.*, 101 Fed. Rep. 831, 836; *Thomson-Houston Co.* v. *Illinois Co.*, 152 Fed. Rep. 631; *Roosevelt* v. *Western El. Co.*, 20 Fed. Rep. 724.

The finding of the Circuit Court places an intolerable burden upon the defendant's conceded right to make and sell the unpatented sound-records of the prior art. *Thomson-Houston Co.* v. *Kelsey Co.*, 75 Fed. Rep. 1005; *Cortelyou* v. *Johnson*, 207 U. S. 196.

The question raised in the Circuit Court upon the motion to punish defendant for contempt was an entirely new question. The act for which defendant was held to be in contempt was not included in the preliminary injunction or the decree therefor. Under such circumstances the motion should have been denied and complainants left to raise the question by appropriate proceedings other than a motion to punish for contempt. *Enterprise Co.* v. *Sargent*, 48 Fed. Rep. 453, 454; *Bate* v. *Eastman*, 11 Fed. Rep. 902 (Blatchford, C. J.); *Allis* v. *Stowell*, 15 Fed. Rep. 242, 244 (Dyer, J.); *Temple Pump Co.* v. *Goss Co.*, 31 Fed. Rep. 292 (Blodgett, J.); *Truax* v. *Detweiller*, 46 Fed. Rep. 117 (Lacombe, C. J.); *Bonsack Mach. Co.* v. *National Co.*, 64 Fed. Rep. 858 (Lacombe, C. J.); *United States Co.* v. *Spalding*, 93 Fed. Rep. 822 (Wheeler, D. J.).

Complainants presented no proof whatever that the sound-records sold by defendant were in a single instance used or intended to be used in any infringement of the claims in suit; no proof whatever that the sound-records sold by defendant were

used for the reproduction of sound on any machine of any construction. The mere making and selling of an unpatented article is not an infringement of a claim for a combination of which that article is an element.

The record in the contempt proceedings includes the record in the injunction proceedings. The patent in suit having expired before the suit was begun, the Circuit Court was without jurisdiction to entertain the suit. The claims in suit, moreover, are void. Hence the judgment finding defendant in contempt was void, because beyond the jurisdiction of the court, and should be set aside, because, the claims being void, the injunction was improperly granted.

Mr. Horace Pettit for respondent.

MR. JUSTICE MCKENNA delivered the opinion of the court.

This writ was issued to bring up for review the judgment of the Circuit Court, affirmed by the Circuit Court of Appeals, adjudging petitioner guilty of contempt of court for violating the injunction which has just been considered in No. 80, and to pay a fine of $1,000, one-half to the United States and one-half to complainants in the suit, respondents here.

The injunction, as we said in the opinion in No. 80, enjoined petitioner, the Leeds & Catlin Company, from manufacturing, using or selling the method expressed in claim 5 of letters patent No. 534,543 to Emil Berliner, dated February 19, 1895, or the apparatus covered by claim 35.

On the fifteenth of November, 1906, respondent, Victor Talking Machine Company, filed a petition in the Circuit Court, charging petitioner with a violation of such injunction. A rule was issued against the Leeds & Catlin Company to show cause why an attachment should not issue against it for contempt of court for violating the injunction, which came on to be heard upon supporting and opposing affidavits and the answer of the Leeds & Catlin Company.

A judgment was entered adjudging the Leeds & Catlin Company guilty of contempt, which was affirmed by the Circuit Court of Appeals. 150 Fed. Rep. 147; 154 Fed. Rep. 58.

The answer of petitioner referred to the record in No. 80, and in this court it is stipulated that that record shall be used as part of the record in the pending cases, and certain of the defenses there made are repeated here. For instance, it is contended, and the record in No. 80 is adduced to support the contention, that (1) the patent in suit having expired before the suit was begun, the Circuit Court was without jurisdiction to entertain the suit; (2) claims in suit being for the functions of a machine are void. And it is further contended that "hence the judgment finding defendant [petitioner] in contempt (*a*) was void, because beyond the jurisdiction of the court; and (*b*) should be set aside, because the claims being void the injunction was improperly granted." These contentions are disposed of by the opinion in No. 80, and we may confine our discussions to the other defenses made in the contempt proceedings.

The facts are practically undisputed, and a detail of them is unnecessary. It is enough to say that petitioner is a manufacturer of disc records, such as are described in No. 80. That is, a record upon which is inscribed a lateral undulating groove of even depth, which, when the disc is revolved, compels the reproducing stylus to be vibrated and propelled across its face.

It will be observed how important the record is to the invention embodied in the claims. It is the undulations in the side walls of the spiral groove which vibrate the stylus back and forth, transmitting the recorded sound waves to the diaphragm, at the same time propelling the stylus as it engages with the record. If a comparison may be made between the importance of the elements, as high a degree (if not a higher degree) must be awarded to the disc with its lateral undulations as to the stylus. It is the disc that serves to distinguish the invention—to mark the advance upon the prior art. "As to the reproducing stylus," as is said by respondent, "it is only necessary that it should be shaped for engagement with the record

and so positioned and supported as to be free to be vibrated and propelled by the record."

The lower courts found that most of the sales (we quote from the opinion of the Circuit Court of Appeals) of the records by petitioner "were knowingly made to enable the owners of the Victor Talking Machines to reproduce such musical pieces as they wished by the combination of the Leeds & Catlin record with said machines; and that the Leeds & Catlin Company made no effort to restrict the use to which their records might be put until after motion to punish for contempt had been made; that the only effort at such restriction ever made was to answer upon the face of the record and notice to the effect that such record was intended and sold for use with the 'feed-device machine;' that the records sold by plaintiff in error [petitioner] were far more frequently bought to increase the repertoire of the purchaser's Victor machine than to replace worn-out or broken records." The "feed-device machine" referred to by the court was a talking machine bought by petitioner after, as petitioner avers, the Circuit Court of Appeals affirmed the injunction, and in connection with which it sold, as it also avers, and used, its sound records. The court assumed, for the purpose of the cause, that the feed-device machine might be regarded as not infringing any of the rights of the Victor Company under the Berliner patent. The court further found that it was established by the evidence that the discs were equally suitable for that machine as for the machine of the Victor Company, but that it "was not at or before the time of beginning this proceeding a practically or commercially known reproducer of musical or spoken sound, whereas the Victor machine, embodying the claims of the Berliner patent here under consideration, was at such times widely known and generally used, and that the plaintiff in error [petitioner] knew, and sold its records with the knowledge, that if its output was to be used at all by the public it would be used with the Victor machine, and in the combination protected by the claims of the Berliner patent, before referred to." And the court concluded that upon these

facts it was clear that petitioner had "made and sold a single element of the claims of the Berliner patent, with the intent that it should be united to the other elements and complete the combination. And this is infringement. *Heaton Peninsula Co.*, v. *Eureka Co.*, 77 Fed. Rep. 297; adopted by this court, *Courtelyou* v. *Lowe*, 111 Fed. Rep. 1005."

Petitioner contests the conclusion and opposes it by the principle, which, it is contended, is established by cases in this court, as well as at circuit, that "the person who has purchased a patented combination from the patentee has the right to replace an unpatented element of the combination and for such purpose to purchase such element from another than the patentee or his licensee." To bring this principle in clear relief it is said that "the majority of the Circuit Court of Appeals has held that such replacement of a single unpatented element of the combination is reconstruction and not within the rights of the purchaser of the patented combination from the patentee." And, to complete its argument, petitioner adds that where an inventor so arranges the parts of his patented combination that it cannot satisfactorily, successfully or usefully be continued in use, without successive replacements of one of its elements, "the replacement of such element, if unpatented, by the purchaser of the combination from the patentee is in *accordance with the intention of the patentee and not a reconstruction* of the patented combination, but an act within the rights of the purchaser." For these principles *Morgan Envelope Co.* v. *Albany Paper Co.*, 152 U. S. 425; *Wilson* v. *Simpson*, 9 How. 109; *Goodyear Co.* v. *Jackson*, 112 Fed. Rep. 146, are adduced.

The question in the case, therefore, is single and direct, and its discussion may be brought to a narrow compass. Its solution depends upon the application of some rudimentary principles of patent law.

A combination is a composition of elements, some of which may be old and others new, or all old or all new. It is, however, the combination that is the invention, and is as much a unit in contemplation of law as a single or non-composite instrument.

Whoever uses it without permission is an infringer of it. Whoever contributes to such use is an infringer of it. It may be well here to get rid of a misleading consideration. It can make no difference as to the infringement or non-infringement of a combination that one of its elements or all of its elements are unpatented. For instance, in the case at bar the issue between the parties would be exactly the same, even if the record disc were a patented article which petitioner had a license to use or to which respondent had no rights independent of his right to its use in the combination. In other words, the fact that the disc sold by petitioner is unpatented does not affect the question involved except to give an appearance of a limitation of the rights of an owner of a Victor machine other than those which attach to him as a purchaser. The question is, What is the relation of the purchaser to the Victor Company? What rights does he derive from it? To use the machine, of course, but it is the concession of the argument of petitioner that he may not reconstruct it. Has he a license to repair deterioration, and when does repair become reconstruction? It would seem that on principle when deterioration of an element has reached the point of unfitness there is a destruction of the combination and a renewal of the element is a reconstruction of the combination. And it would also seem on principle that there could be no license implied from difference in the durability of the elements or periodicity in their use. This, however, is asserted, and we come to the consideration of the cases upon which the assertion is based, and how far it has application under the facts of this record.

Great stress is put upon *Morgan Envelope Co.* v. *Albany Co.*, *supra*. That case was a bill in equity for the infringement of three letters patent, one for a "package of toilet paper," known as an "oval roll" or "oval king" package; one for a "toilet paper fixture," and one for an "apparatus for holding toilet paper." The first patent was declared invalid for want of novelty. Of the other two it was said that they were practically the same and were for a "combination of the paper roll de-

scribed in the former patent, with a mechanism for the delivery of the paper to the user in an economical manner." It was conceded that the mechanism of the patents involved patentable novelty, but it was contended that it being constructed for the purpose of delivering paper to users in convenient length such a roll was not a proper part of the combination, and that, conceding it was a part of the combination, there was no infringement. The first contention, the court said, raised the question whether, when a machine is designed to manufacture, distribute or serve out to users a certain article, the article so dealt with can be said to be a part of the combination of which the machine itself is another part. In commenting on the question the court expressed the view that if the contention could be sustained "it would seem to follow that the log which is sawn in the mill, the wheat which is ground by rollers, the pin which is produced by the patented machine, the paper which is folded and delivered by the printing press," might be claimed as an element of a combination. The court, however, refrained from expressing an opinion upon the point, because it conceived that the facts of the case failed to sustain the charge of infringement. And this on the ground that the defendants in the suit had neither made, sold nor used the patented mechanism, except as they purchased it from the patentee, and the only acts proven against them were that they sold rolls of paper of their own manufacture with fixtures manufactured and sold by the plaintiff, the fixtures having been obtained by defendants from the original purchasers of the patented combination; and also of selling oval rolls of paper of their own manufacture to persons who had previously purchased fixtures and paper from the plaintiff, with the knowledge and information that the paper so sold was to be used in connection with plaintiff's fixtures. The court stated the question to be whether, considering the combination of the oval roll with the fixture to be a valid combination, the sale of one element of *such* (italic ours) a combination with the intention that it should be used with the other elements was an infringement. The answer was in the

negative. The court, however, stated, that there were cases to the effect that the sale of one element of a combination with intention that it should be used with another was an infringement, but decided that they had no application to one where the element made by the alleged infringer was "an article of manufacture, perishable in its nature, which it is the object of the mechanism to deliver, and must be renewed periodically whenever the device is put to use." The case, therefore, is not a precedent for the decision of that at bar. Not one of the determining factors there stated exists in the case at bar. If the operative relation of the paper roll to the mechanism was as illustrated (and the court left no doubt that it was), that is, of the log to the saw in the mill, wheat to the rollers which grind it, pins which are produced by a patent machine; in other words, in no more operative relation than a machine and its product are, the invalidity of the combination was hardly questionable. And, besides, it was made a determining circumstance that the paper perished by its use, and a periodical renewal was indicated to be a renewal "whenever the device was put to use." The case has no principle or reasoning applicable to the case at bar. The combination in the case at bar is valid, as we have unhesitatingly declared. The function it performs is the result of the joint action of the disc and the stylus. The disc is not a mere concomitant to the stylus; it co-acts with the stylus to produce the result. Indeed, as we have seen, it is the distinction of the invention, constituting, by its laterally undulating line of even depth and the effect thereof, the advance upon the prior art. To confound its active coöperation with the mere passivity of the paper in the mechanism described in the *Morgan Envelope Company case* is not only to confound essential distinctions made by the patent laws, but essential distinctions between entirely different things. Besides, the lower courts found that the discs were not perishable. As said by the Court of Appeals, by Judge Hough: "Disc records are fragile, *i. e.*, brittle and easily broken; but they are not perishable, *i. e.*, subject to decay by their inherent qualities, or consumed by few uses

or a single use. Neither are they temporary, *i. e.*, not intended to endure; on the contrary, we find that they are capable of remaining useful for an indefinite period, and believe they usually last as long as does the vogue of the sounds they record."

Can petitioner find justification under the right of repair and replacement as described in *Wilson* v. *Simpson*, 9 How. 109, and *Chaffee* v. *Boston Belting Co.*, 22 How. 217? The Court of Appeals, in passing on these cases, considered that there was no essential difference between the meaning of the words "repair" and "replacement." That they both meant restoration of worn-out parts. This distinction was recognized in *Wilson* v. *Simpson*, *supra*, where it is said that the language of the court in *Wilson's and Roussan's Case*, 4 How. 709, did not permit the assignee of a patent to make other machines or reconstruct them in gross upon the frame of machines which the assignee had in use, "but it does comprehend and permit the resupply of the effective ultimate tool of the invention, which is liable to be often worn out or to become inoperative for its intended effect, which the inventor contemplated would have to be frequently replaced anew, during the time that the machine as a whole might last." But there is no pretense in the case at bar of mending broken or worn-out records, or of repairing or replacing "the operative ultimate tool of the invention" which has deteriorated by use. The sales of petitioner, as found by the courts below, and as established by the evidence, were not to furnish new records identical with those originally offered by the Victor Company, but, to use the language of Judge Lacombe in the Circuit Court, "more frequently in order to increase the repertory of tunes than as substituted for worn-out records."

The right of substitution or "resupply" of an element depends upon the same test. The license granted to a purchaser of a patented combination is to preserve its fitness for use so far as it may be affected by wear or breakage. Beyond this there is no license.

It is further contended by petitioner that the disc records,

being unpatented articles of commerce which could be used upon the mechanical feed device machine or exported to foreign countries, or concededly for repair of machines sold by respondent, petitioner could legally sell the same. A detailed comment on this contention or of the cases cited to support it we need not make. The facts of the case exclude petitioner from the situation which is the foundation of the contention. The injunction did not forbid the use of the records, except in violation of claims 5 and 35 of respondent's patent. The judgment for contempt was based upon the facts which we have detailed and they show a sale of the records for use in the Victor machine, "an entirely voluntary and intentional" (to use the language of Judge Lacombe) contributory infringement.

We have seen that the Circuit Court of Appeals assumed, for the purposes of this cause, that the feed device machine was not an infringement of the machine of the patent. We may assume the same, and we are relieved from reviewing the very long and complex affidavits submitted by the petitioner to explain the same, petitioner's relation to it or its position in the art of sound reproduction. Petitioner was found guilty of selling records which constituted an element in the combination of the patent in suit, and for that petitioner was punished. Upon whatever questions or contentions may arise from the use of the feed device machine we reserve opinion.

We have not reviewed or commented upon the other cases cited respectively by petitioner and respondents in support of their contentions, deeming those we have considered and the principles we have announced sufficient for our decision.

Judgment affirmed.